

RAILWAY AGE

One of Five Simmons-Boardman Railway Publications

A "CRUTCH"  IS NOT A CURE

Timken® bearings
don't "doctor"
the Hot Box
Problem—
they eliminate
the cause

*...and they pay for themselves over
and over and over in operating
and maintenance savings*



THE way to cure the hot box problem is to eliminate the cause—not "doctor" it. Devices which merely serve as "crutches" for friction bearings, in an attempt to improve their performance, are not the answer. Timken® tapered roller bearings eliminate the cause, the friction bearing itself.

In addition to throwing away your "crutches"; with Timken bearings you can eliminate the frequent inspection and lubrication you now rely on, even with "crutches", to keep friction bearings operating. With Timken bearings, terminal bearing inspection time is reduced 90%, lubricant cost as much as 89%. And when all railroads go "Roller Freight" they'll save \$190 million a year, earn a 22% annual return on the investment.

**LOADS
DON'T SLIDE
—THEY ROLL**

How do Timken bearings do away with hot boxes? They don't slide the load—they roll it. There's no chance for metal-to-metal sliding friction. And the tapered design makes Timken the only roller bearing you can count

on to cure the hot box problem and bring costs down to rock bottom. It prevents lateral movement. There's no scuffing or skewing—bearings last longer. There's no pumping action—less lubricant is needed.

To insure bearing quality every step of the way, we make our own steel. We're America's only bearing manufacturer that does. And we make it nickel-rich for added toughness.

**PRICE
GAP
NARROWING**

The cost of buying and maintaining "crutch" devices for friction bearings narrows the price gap between friction and roller bearings. So does the new heavy-duty Timken bearing assembly which cut the cost of roller bearing applications 18% to 25%. And a practice adopted recently by one major railroad can shrink it even more.

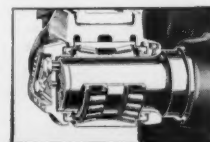
**PRACTICAL
PLAN FOR
CONVERTING**

This railroad has a practical program under way for converting to "Roller Freight". Every freight car that comes into its shops

for major repairs is converted to roller bearings. This system encourages a steady shop and labor schedule, reduces the cost of bearing installation, and allows the railroad to pay for its conversion over a period of years. If more roads were to adopt this practice, it would enable us, too, to operate on a more continuous production schedule. This in turn will effect manufacturing economies we could pass on to you in the form of lower prices.

When you tackle the hot box problem, make sure you eliminate it. Not just "doctor" it. And make sure you're really cutting operating and maintenance costs to a minimum. Timken tapered roller bearings can put you in the "Roller Freight" business and on the way to bigger savings than were thought possible. With the hot box problem solved, you'll be in a good position to offer better service to your customers. For more information on "Roller Freight", write The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

Only **TIMKEN®** bearings cure the hot box problem and cut operating and maintenance costs to a minimum





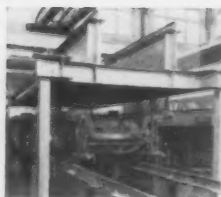
Whiting Drop Table Keeps Diesels Rolling

In the new Missouri Pacific shops at North Little Rock, Arkansas, a Whiting 100-ton Drop Table helps provide first-class service and uninterrupted repairs for Diesel locomotives — handling 90 to 100 units a day! Engineered and built to the Missouri Pacific's special requirements, this Whiting Drop Table not only speeds repair work, but also saves manpower, assures greater safety and reduces overall costs. More than 500 Whiting Drop Table installations with capacities from 10 to 150 tons serve the railroad industry today. Talk over your requirements with a Whiting engineer . . . he will help you decide the type and size of drop table best suited to your shop layout.

Write today . . . for Whiting Drop Table Bulletin DT-C-404. It shows how Whiting installations save time on locomotive, coach and tender repairs.

WHITING CORPORATION

15603 Lathrop Avenue, Harvey, Illinois



Temporarily powered repaired truck pushes old truck off table.



Down goes repaired truck into pit to be racked to service track.

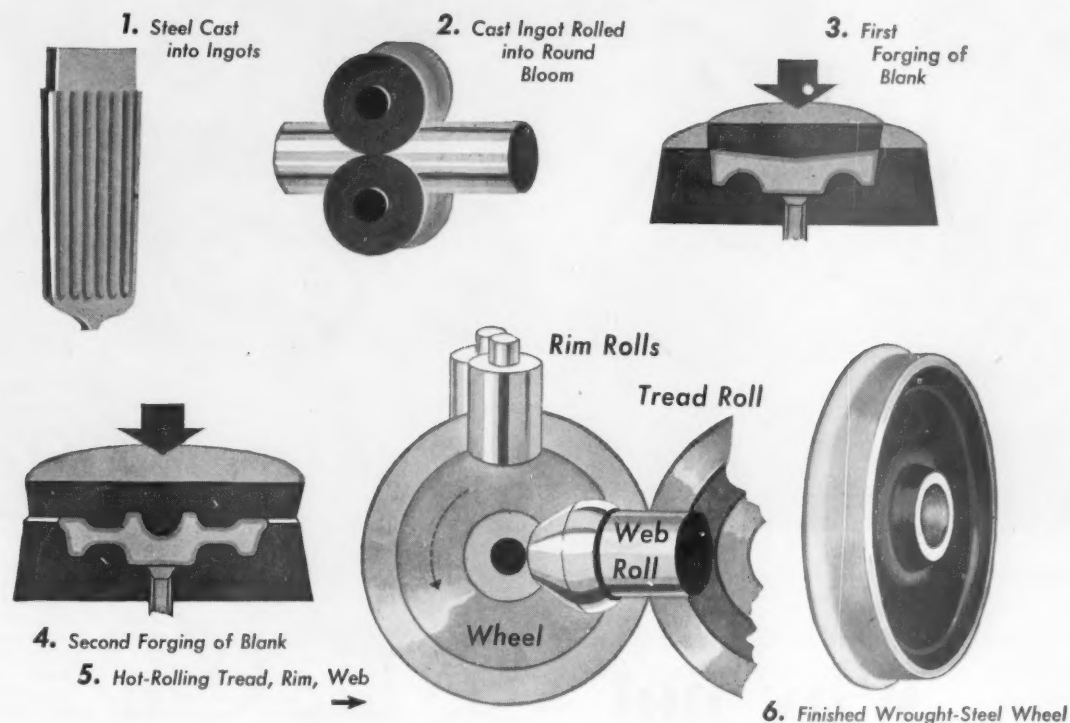


Up it comes on Whiting Drop Table to position under locomotive.



In position, ready for installation—all in a matter of minutes!

Forging and Rolling Make Better Wheels



The superior properties of wrought-steel wheels are widely recognized. But the technical "reasons why" may not be so generally understood. Certainly one fundamental reason is the working that the steel receives between the cast ingot and the finished forged wheel.

At Bethlehem this working occurs at four different stages of manufacture: as the cast-steel ingots are rolled into round blooms; as the wheel blank receives the first and second forgings; and as tread, rim, and web are rolled in the vertical mill. Each of these four important steps has a marked beneficial effect on the steel, and hence on the quality of the finished wheel itself.

Bethlehem wrought wheels are made from steel specifically melted to meet every standard of AAR

specifications. The steel is *right*—the first fundamental of a durable railway wheel. And wherever heat-treating is specified, it is expertly handled in the most modern equipment.

When a Bethlehem wrought-steel wheel emerges in finished form, it is ready for unlimited application and interchange. Remember, Bethlehem is a veteran builder of AAR-approved railway wheels. For freight service alone, we have furnished more than 2,000,000 . . . with the total growing daily. High-quality passenger and diesel wheels are also Bethlehem specialties, and are widely used in the country's blue-ribbon trains. Need anything more be said?

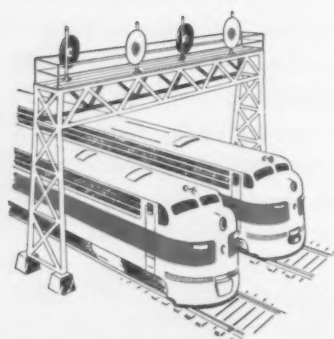
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BETHLEHEM WROUGHT-STEEL WHEELS
COMPANIONS TO BETHLEHEM FORGED-STEEL AXLES
FREIGHT • PASSENGER • DIESEL





Why not C.T.C. *all the way?*



YOU CAN CONTROL any length of railroad, any number of tracks, light or heavy traffic with **UNION Traffic Control Systems.**

The benefits of centralized traffic control are well established. You can increase track capacity, cut train time by hours, eliminate unnecessary tracks and effect large savings in operating expense.

C.T.C. not only pays for itself quickly, but goes on to earn handsome profits. It is one of the best investments a railroad can make, paying returns of 15% to 25%—and in some cases even more.

If your road has only spotty in-

stallations, you are getting only spotty benefits. Why not start a program to install C.T.C. *all the way?*

UNION Traffic Control Systems are now available for single or multiple tracks—for light or heavy traffic. They are "tailored" to fit your needs.

Our staff of traffic control engineers can make a survey for you to determine possible savings. There's no obligation. Just call our nearest office for complete details.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE



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NEW YORK • CHICAGO • ST. LOUIS • SAN FRANCISCO

RAILWAY AGE

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September 5, 1955

Vol. 139, No. 10

Week at a Glance

Decisions should be made on the job by officers thoroughly familiar with the circumstances—not by the big boss in some remote main office. That's true of nine out of ten problems that come up, says President Appley of the American Management Association in some observations about duties of subordinate executives which are discussed in this issue's Benchmarks and Yardsticks column. 7

"I do not foresee the day when railroads will reach a saturation point for diesel horsepower," declared General Motors' President Harlow H. Curtice at the opening of GM's "Powerama" in Chicago last week. "The country's continuing growth will require more and more trains to keep commerce moving and more and more locomotives to haul those trains. With progressive management the railroads must and will share in the dynamic growth of our national economy," Mr. Curtice said. 9

Four coordinated railroad mechanical associations meet in Chicago next week. At the same time 125 railway supply manufacturers are exhibiting their products and equipment, the big Machine Tool Show is running at the International Amphitheater, and the Production Engineering show is in progress on the Navy Pier—all in Chicago. 13

FORUM: Replacements of key men have to be kept in training by management—and not only for top level men but for subordinates. That's management's top duty, in fact, and it's worth while occasionally to check the age brackets and educational backgrounds of the "back-up" people to make certain that this management responsibility is being adequately discharged. 37

"Aerotrain" and "Talگو"—the former from General Motors and the latter from ACF Industries, were on display for railroad men in Chicago a few days ago, and the Talگو—forerunner of the Rock Island "Jet Rocket"

**IT'S HYATTS AGAIN FOR
NEW PIGGY-BACK CARS...
THIS TIME ON THE ERIE!**



Seems significant, doesn't it, that practically all the new flatcars designed for hauling highway trailers are being built with *roller bearings*? Pretty conclusive proof that where speed and delay-free dependability count, *railroads recognize roller bearings are the answer!*

It's even more significant that so many of these piggy-back cars have **HYATTS**.

To make sure *your road* will get its full share of this profitable new revenue, make sure your piggy-backs will ride on roller bearings. And to make *doubly* sure of minimum motive power, maintenance and lading damage costs, make those roller bearings **HYATTS!**

If you're not sure why, we'd like a chance to show you—*right now*.

HYATT

**ROLLER BEARING
JOURNAL BOXES**

RUNNING MATE OF FASTER FREIGHT

HYATT BEARINGS DIVISION • GENERAL MOTORS CORPORATION • HARRISON, NEW JERSEY

Current Statistics

Operating revenues, six months	
1955	\$4,820,336,062
1954	4,591,252,244
Operating expenses, six months	
1955	\$3,645,751,965
1954	3,683,934,579
Taxes, six months	
1955	\$ 521,641,721
1954	440,067,072
Net railway operating income, six months	
1955	\$ 526,830,860
1954	342,337,672
Net income estimated, six months	
1955	\$ 416,000,000
1954	232,000,000
Average price railroad stocks	
August 30, 1955	94.49
August 31, 1954	67.10
Carloadings, revenue freight	
Thirty-three weeks, 1955	23,354,349
Thirty-three weeks, 1954	21,165,319
Average daily freight car surplus	
Wk. ended August 27, 1955	5,482
Wk. ended August 28, 1954	78,408
Average daily freight car shortage	
Wk. ended August 27, 1955	12,713
Wk. ended August 28, 1954	628
Freight cars on order	
August 1, 1955	42,888
August 1, 1954	12,889
Freight cars delivered	
Seven months, 1955	19,340
Seven months, 1954	25,403
Average number of railroad employees	
Mid-July 1955	1,090,756
Mid-July 1954	1,078,232

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Departments

Benchmarks & Yardsticks..	7
Competitive Transport	13
Equipment & Supplies	9
Figures of the Week	11
Financial	16
Forum	37
Law & Regulation	11
New Facilities	15
Operations	12
Organizations	13
People in the News	11
Railway Officers	54
Securities	54
Supply Trade	14
Traffic	13
What's New in Products	35

Week at a Glance CONTINUED

due for delivery the end of the year—made up to 103 mph on a test run. **38**

Training tomorrow's officers — another contribution this week to the overall theme of supervisory personnel development—is systematically effected on the Illinois Central by the use of transportation assistants who get special assignments in the office of the general superintendent of transportation. **40**

Two new rail sections have been developed by the Colorado Fuel & Iron Corp. While they are designed around the Southern Pacific's 113-lb and 132-lb sections they embody important modifications intended to produce greater stiffness and longer life. **41**

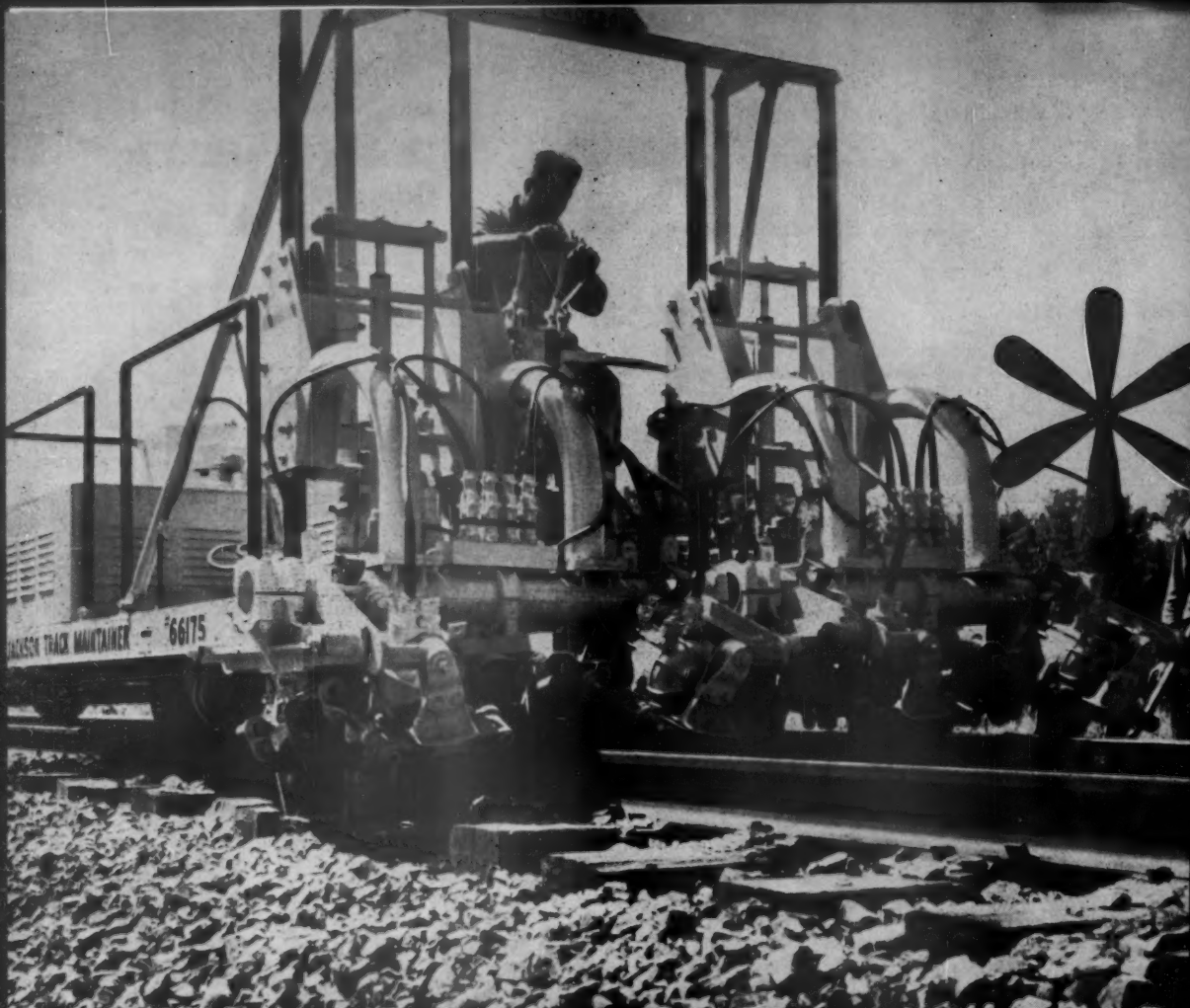
Mechanical drive for diesels is here, says the New Haven's W. J. Harlow. That road is awaiting delivery from Baldwin of high-speed passenger units incorporating the German Mekydro design, and meanwhile that builder has delivered to the Army a 52-ton switcher which has this form of transmission. It's illustrated and described herein. **43**

Railway Express cuts handling costs at its Los Angeles terminal with a new system that does away with multiple handling and puts operations on one level. **46**

What 3,000 officers and supervisors like and don't like about their jobs on the railroad—in this case the Illinois Central—was revealed in a recent "open letter" solicited by the road's management. **48**

BRIEFS

"This train will save an industry," said the New York Central in a full-page advertisement in metropolitan newspapers last week. The train is the GM "Aerotrain." The ad states that the New York Central will put such a train in its Chicago-Detroit service next spring. Meanwhile General Motors has stated that this train and another like it will be released to the Pennsylvania and



JACKSON TRACK MAINTAINER



FOR 1956

This is the machine you are virtually sure to specify if you want the best possible means of both putting up and maintaining track of finest quality — regardless of conditions or type of ballast used. For, investigation of what it has done and is doing on leading railway systems in all parts of the country is bound to convince you of the JACKSON TRACK MAINTAINER'S vast superiority. By all means write, wire or phone for the facts before making your recommendations for '56.

Acquirement plans to suit your needs.

JACKSON VIBRATORS, INC.
LUDINGTON, MICHIGAN

Week at a Glance CONTINUED

the NYC for tests and demonstration around November 1.

Francis C. MacDonald is Shirley Mills' successor as chief of the Section of Railroad Safety in the ICC's Bureau of Safety and Service. He stepped up from assistant chief on September 1, the day after Mr. Mills retired.

The Chicago & North Western on September 2 discontinued its "400 Hour" radio show at Chicago. The road said its decision to end the 18-year-old show stems from a request by station WMAQ for a further reduction in program time. The show was cut from 55 minutes to 25 minutes about two years ago.

The Railway Progress Institute, successor organization to the Railway Business Association, is publishing a 12-page booklet outlining the institute's history, purposes and program. The booklet, designed to aid RPI membership committees in enlisting new members, defines the institute as the "voice and promotional arm" of the railway supply industry.

A mock-up of a new "Slumbercoach," which the Pullman Company feels has a definite place in today's travel market, is being quietly shown to railroad officers. Designed as a service to the industry—plans for the sleeper-coach will be made available to any interested railroad.

An overhead monorail system, of the type being considered by several cities as a possible solution to their traffic problems, is reportedly under construction in Houston. The venture, labeled as a "full-scale test," will reportedly be 830 ft long, cost \$50,000, use diesel instead of electric power.

Benchmarks and Yardsticks

LAWRENCE APPLEY, PRESIDENT of the American Management Association, set down some observations a couple of years ago in the AMA's Management News, from which some extracts in mimeographed form are going the rounds of one of the big railroads.

Mr. Appley describes a situation by no means unusual. A subordinate goes in to see the boss and tells him the pros and cons of a troublesome problem in the subordinate's bailiwick. He then looks at the boss "with a question mark all over his face"—and what does the boss say or do?

Too often, what the boss is likely to do is to suggest a few solutions, to each of which the subordinate points out some objection. So the boss is apt to wind up by saying he will think the situation over—and give his answer later.

And what has happened here? Simply that the subordinate has unloaded a headache, which ought to be his, onto his boss. The subordinate doesn't have to think about it any more. If the boss delays in coming up with an answer, then it is the boss who has fallen down, not the subordinate. This, says Mr. Appley, is how the boss gets himself headed for a case of ulcers.

Decisions, says Mr. Appley, should be made "as near as possible to the point where they have to be put into effect." If there are good reasons why these decisions should be checked at a higher level, then they should come to the boss as recommendations from his subordinate—not in the form of questions for the boss to answer.

Mr. Appley concludes that it is the responsibility of the boss to train his subordinates to make their own decisions—the right ones, of course. If such instruction is thoroughly imparted and the subordinate still does not come up with recommendations, but only with questions, then maybe he isn't the man for the job he has.

In any event, to be correct and timely, nine out of ten decisions need to be made on the job by officers who are thoroughly familiar with local circumstances. The boss, far removed from daily contact with the circumstances which control the situation, can hardly be expected to come up with answers which fit these circumstances completely. A good manager is one who provides himself with subordinates capable of making correct decisions, and who requires them to make these decisions. If he doesn't do so, he casts doubt on his own ability as a manager.

J. G. L.



1.

2.

3.

You can *always* trust

Simtex quality

Close-up of the tablecloth industry's most extensive quality control program—and how it pays off for you

The six photographs on this page show key steps in the 19 separate tests Simtex uses to assure uniform quality, unique in the tablecloth field. What does this mean to you? It means lasting lustre, texture, hand; it means a uniformly long life and economy you can bank on. It's smart housekeeping to specify Simtex.

1. Expert cotton grader classifies cotton fiber for length and fineness.


2. Delicately measuring the thickness of a cotton fiber.

3. Hand combing cotton before measuring fiber length electronically.

4. Computing size and uniformity electronically. This is done at 7 different stages.

5. Measuring the breaking strength of yarn. Same machine tests strength of finished tablecloths.

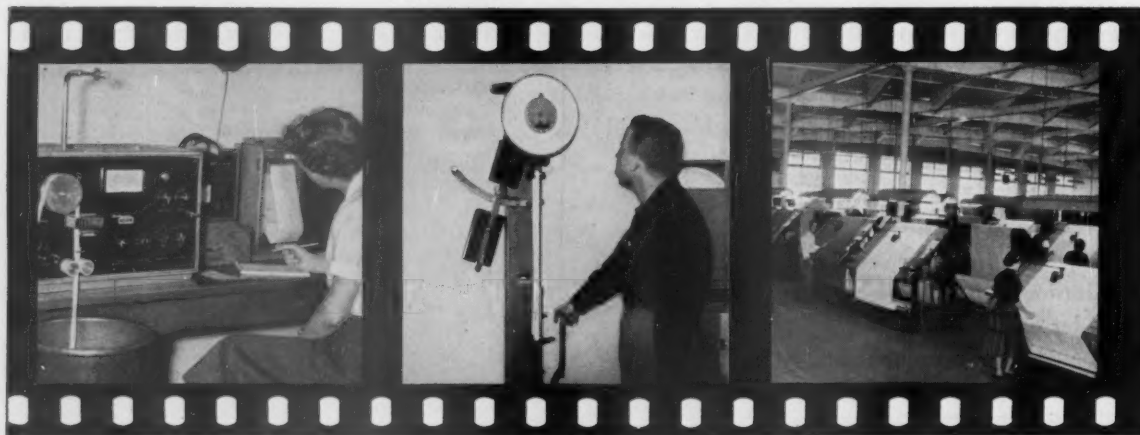
6. Every square inch of damask is inspected by trained personnel. Three such inspections are given each tablecloth and napkin.

 **Simtex** MILLS, Div. of Simmons Co., Empire State Bldg., 61st Floor, N.Y. 1, N.Y.

4.

5.

6.



GM Unveils Giant "Powerama"

"World's Fair of Power" opens at Chicago; railroad equipment shares the spotlight.

General Motors threw open the doors on its new multi-million-dollar "Powerama" show in Chicago last week, with railroad equipment occupying a major role in this "Modern Industrial Miracle."

The show, dramatizing the contribution of diesel and aircraft power to America's industrial growth, will run until September 25. It is open to the public, free. It occupies the lake front

site where, a few years ago, the nation's railroads presented their own "Railroad Fair."

Introduced to the public for the first time at "Powerama" is GM's new lightweight "Aerotrain," which is described elsewhere in this issue. Also on display are all types of diesel locomotives manufactured by the Electro-Motive Division.

These locomotives include a "before"

and "after" version of remanufactured units—the system which permits railroads to turn in older diesel units to EMD for "upgrading." Also on hand is a special duty SD9 locomotive, and a G12 export locomotive built for the New Zealand Government Railways.

The new mechanized refrigerator car, the "Frigifrater;" EMD's engineering test car, and cross-section cutaways of actual electrical equipment and engines used in locomotives are all displayed.

The GM fair commemorates the production, as of this year, of the corporation's first 100 millionth diesel horsepower. In addition to the railroad exhibits, the fair features products from such GM divisions as Allison, Detroit Diesel, Cleveland Diesel, Euclid, Fabricast, Frigidaire and GMC Truck & Coach.

Harlow H. Curtice, president of GM told an opening day press conference that diesel power has given the nation "new muscles to build its roads, cut its timber, drill its wells, clear and plow its fields, propel its ships and drive its trains."

The most spectacular change, he said, has taken place on the railroads where diesel power replaced the "Iron Horse" and provided a saving in fuel and maintenance alone of \$600 million a year.

Mr. Curtice went on to forecast continued expansion of the market for diesel horsepower in the field of railroad transportation; and he predicted that the new "Frigifrater" will revolutionize the transportation of perishables.

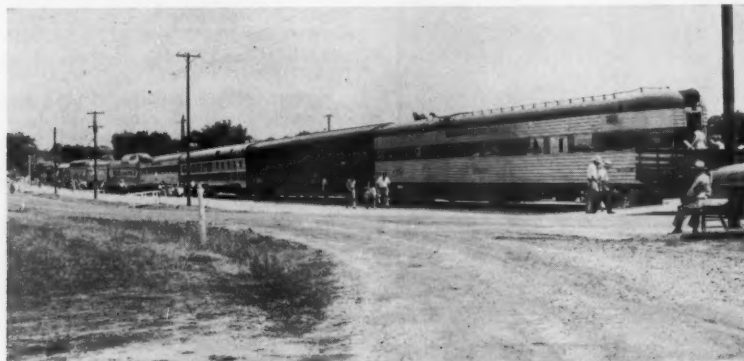
"The new car," he said, "will make the old-style refrigerator car as obsolete as the steam engine."

RAILROADS "SHOW 'EM" IN MISSOURI



A COLORFUL ENTRANCE, featuring emblems of seven participating railroads and the Pullman Company, helped draw record crowds to the

railroad exhibit at the 1955 Missouri State Fair. The fair was held at Sedalia, August 20-29. The exhibit averaged over 900 visitors an hour.



COMPLETE PASSENGER and freight trains, made up from equipment of all the roads and Pullman, were on display. In addition to these modern

passenger cars, visitors also saw the latest in freight equipment, including such things as a loaded "piggyback" car and a mechanical reefer.

H&M Demonstrates Air-Conditioned Car

The Hudson & Manhattan, on August 31, staged a demonstration run of an air-conditioned passenger car from Hudson Terminal, New York, to Hoboken, N. J., and return. The air conditioning equipment was supplied by the Safety Car Heating & Lighting Co., and is installed in one of the car vestibules. Located this way, in the passenger space, it necessitates closing one vestibule door. Electrical equipment is placed in an adjacent locker which requires the space of one passenger seat.

The equipment is in package form and has a capacity of 12 tons. The three 600-volt motors driving the compressor, the condenser cooling fan and the air circulating fan have a total capacity of 18 hp. Control equipment operates from the car's 64-volt circuits. A total of 3,000 cfm of air, 25% of which is fresh air, is delivered through

a central duct to air diffusers in the car ceiling. The car was 45 ft long. A differential of 10 to 15 deg between ambient and inside air is possible.

A similar car employing four individual air-conditioning units will be demonstrated on lines of the New York City Transit Authority.

FREIGHT CARS

New Concept Freight Car To Be Tested This Month

An entirely new type of freight car, designed to provide swift loading and unloading of "unitized" lading, has been built by International Steel Company, Evansville, Ind.

The "RB" type car (refrigerated car, without ice bunkers) was designed and built for a newly formed company, the Unit Load Car Corporation. It will be service tested throughout September by the Calumet Industrial District Company, a food warehousing firm at Chicago.

Features of the new car include ten overhead garage-type doors, five to the side. The interior is divided into five compartments with permanent bulkheads, each compartment having a floor area of 69 sq. ft. The doors provide a 7-ft, 6-in by 9-ft, 3-in opening into each compartment.

New materials are widely used in the car. Floor, ceiling and bulkheads are of sandwich construction, using expanded Styrofoam for insulation. The lading floor is aluminum.

The built-in bulkheads are constructed of a steel framework in which sandwich panels are adhesively secured. These panels—and the ceiling—are faced with polyester impregnated Fiber-

glas. The bulkheads are equipped with band anchors.

Primary purpose of this car is to facilitate loading and unloading of palletized lading with fork or lift trucks. It was designed by and built for a shipper. It is expected to reduce loss and damage claims; and it aims at elimination of dunnage or loose devices for securement of lading.

Use of the Styrofoam insulation and Fiberglas facings inside the car will, the designer believes, provide an odorless, moisture-proof, vermin-proof and corrosion-proof interior.

The **Boston & Maine** directors have authorized purchase of 1,000 50-ton roller-bearing-equipped box cars at an approximate cost of \$8,000,000. This is the largest single order for freight cars ever placed by the B&M, as well as its first purchase of freight cars equipped with roller bearings. Delivery is anticipated during the first quarter of 1956. The cars will be 50½-ft long, with 9-ft side doors.

The **Erie** has ordered 550 50-ft box cars from the Greenville Steel Car Company at a cost of \$6,937,500 for delivery early next year. Five hundred of the cars will be equipped with "damage free" stowing devices for shipping automobile parts and other freight. The road's board also has authorized expenditure of \$470,000 for 10 steel scows (page 11).

The **Pennsylvania** has ordered 100 75-ft flat cars from its Altoona Pa., shops. Each of the 70-ton cars will be equipped with roller-bearing trucks and rubber-cushioned draft gears, and will be capable of carrying two highway truck trailers in the road's Truc-

Train service. Delivery is scheduled for later this year.

LOCOMOTIVES

All But 2% of Diesels Were Built Since 1940

More than 98% of the diesel-electric locomotives in service on Class I roads at the end of 1954 were built in the last 15 years.

According to an article in "Transport Economics," published by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, more than 54% were built in the five years ending in 1954.

The report states that there were 23,531 diesel-electric locomotives on Class I roads at the end of last year as against only 8,650 steam locomotives. This compares with 37,551 steam locomotives in service at the end of 1946 and 4,441 diesel-electric locomotives at that time.

Of the steam locomotives in service December 31, 1954, only 4.4% were built in the 10-year period ending then, 75.4% were built before 1930, and 25.9% were built before 1915. Under 1% were built since 1950. Of the diesel-electrics in service at the end of last year—amounting to 71.6% of the total of all locomotives in service—10.8% were built in the 1940-1944 period and 33.1% during 1945-1949.

The report also states that of 656 electric locomotives in service at the end of last year—representing 2% of all locomotives—about 85% were constructed before 1940.

Additionally, the report shows, the tractive effort of the various types of locomotives—measured in millions of pounds—has corresponded very closely to the numbers of locomotives in service.

Where steam locomotives accounted for 87.6% of locomotives in service in 1946, they supplied 87.1% of the tractive effort at that time. At the end of 1954, steam locomotives accounted for 26.3% of all locomotives and supplied 27.4% of the total tractive effort. Corresponding figures for diesel-electrics are 10.4% and 10.7% in 1946 and 71.6% and 70.4% at the end of 1954.

However, the report points out, "although the total number of locomotive units in service declined from 42,841 in 1946 to 32,872 in 1954, or a decrease of 23.3%, the total tractive effort was decreased only 14%."

The **Canadian National** has ordered three 400-hp road-switching diesel-electric units from the Canadian-General Electric Company for delivery early in 1956.

The **Southern Pacific** has ordered 185 diesel-electric units costing about \$34,000,000. Orders were placed with Electro-Motive, Alco Products, and Fairbanks, Morse. Deliveries are scheduled to begin next November and be



TURKISH RAILROADERS get an eyeful of a 300-ton multi-punch press at Standard Railway Equipment Manufacturing Company's plant at Hammond, Ind. Samin Ozgur (left) and Mustafa Yalcintemel (right) on tour

of American manufacturing plants to study production methods, hear from Jack Bosky, production inspector at Standard, how this pre-s punches holes in the doors for railroad hopper cars.

completed by May 1956. Acquisition of the units will permit retirement of more than 170 steam locomotives and will increase the SP's diesel fleet to 1,846 units comprising more than 2½ million hp. Most of the 186 new units will be assigned to main line freight service.

The **Spokane, Portland & Seattle** has ordered 15 diesel-electric road-switching locomotive units at an approximate cost of \$2,500,000. Alco Products will build nine 1,600-hp units; and Electro-Motive, six 1,750-hp units. Four E-M units will be equipped for both passenger and freight service. Delivery of the Alco units is expected during the fourth quarter of 1955, and the six from E-M are scheduled for delivery early next year.

MARINE

The **Erie** directors have authorized expenditure of \$470,000 for 10 steel scows for service in New York harbor.

People in the News

Lessard to Study Future Of Transport in Canada

J. C. Lessard, vice-president of Standard Railway Equipment Manufacturing Company (Canada), has been named as transportation consultant to the Royal Commission on Canada's Economic Prospects.

Mr. Lessard, who served as Canada's deputy minister of transport from 1948 to 1953, will supervise a study for the commission on developments which may be expected in the transportation field over the next 20 to 30 years. The study will cover all phases of transportation.

Law & Regulation

Plans for War Transport Agency Nearing Completion

The Office of Defense Mobilization has reported that "considerable progress" has been made in planning for a War Transport Administration to operate in event of war.

In a report covering various phases of preparations for outbreak of war, the ODM advised the Joint Committee on Defense Production that this agency would control all forms of transport.

It would be, the report said, "a temporary civilian agency within the Office of Defense Mobilization, or its successor, having equal status with other wartime control agencies and not subject to control by a single claimant

or user." Plans for WTA have been approved, the report said, by all interested agencies and now await consideration by the Defense Mobilization Board.

In the event of an emergency before the agency can be established, the report continued, necessary controls would be exercised through the Coordinator of Defense Transportation operating in conjunction with the Interstate Commerce Commission, National Shipping Authority and Defense Air Transport Administration.

Referring to the ODM's "Conway Committee" report on railroad equipment requirements for full mobilization (*Railway Age*, August 15, page 48), the report stated that rail motive power is believed to be "reasonably adequate, but there would be a serious shortage of freight cars." The ODM said it has advised the Association of American Railroads of "the urgent need for additional cars" and added that the committee is continuing its study.

ODM also reported that a three-man group, comprised of representatives of the ICC, Federal Civil Defense Administration and Department of Defense, is surveying transport planning in 30 target areas to obtain material to be used "as the basis for a manual of guidance in transportation planning under anticipated conditions of attack."

Other subjects discussed in the report included a program for mobilizing air transport, production and stockpiling of materials and supplies, manpower mobilization, telecommunications, electric power and fuels.

PAY IT YOURSELF? NOT THE BARGEMEN!

Barge operators along the Illinois waterway have a problem.

The district waterways office of the Coast Guard has notified them that there will be no icebreaking service this winter because no funds were appropriated for the Coast Guard to do the job. The service costs about \$200,000 for a normal winter season and the Coast Guard told the bargemen it would be up to them to find funds if the job is to be done.

So the barge operators gathered in a huddle in Chicago the other day. They decreed that interruption of service to the Chicago area could be a serious thing if the winter ahead proves to be severe. There must be no interruption, they concluded. So they went to work on the problem of getting funds.

Their solution? A campaign to arouse their shippers and receivers, and the heads of city, county and state governments into action and support for reestablishing the \$200,000 appropriation!

It should be added that "pay-it-yourself" did occur to the operators, but, by their own admission, that is strictly a "last ditch" proposition.

"Champerty" in Attack on Rates, Says Florida PUC

The Florida Railroad & Public Utilities Commission has recently dismissed a complaint, filed with it against the Florida Power & Light Co., alleging "unreasonable, excessive, arbitrary, and discriminating rates"—and seeking an investigation and reduction of these rates. While the case had to do with electric rates, the decision is believed by competent railroad counsel to have some bearing on parallel cases affecting railroads.

The ground for dismissal was the commission's finding that the real complainant in the case was, actually, not the group of the company's customers named in the complaint but, instead, a "utility analysis" concern. This concern had contracts with the customers, providing that the analysis group would, by way of compensation, get for three years 50% of whatever rate reductions the company was forced to make as a result of the proceeding.

This arrangement, in the view of the Florida commission, was "champertous"—especially so the agreement by the analysis group to pay all legal costs of the proceeding. Another "champertous" feature, said the commission, was the situation "in which a person, for his own selfish gain, and a stranger to the subject matter, stirs up strife and litigation by bringing a proceeding which a party in interest might not do if left to his own judgment. . . ." [The dictionary defines champerty as litigation undertaken in behalf of a client, with payment to be made to the initiator of the litigation in the form of a share in the proceeds which may accrue to the client as a result of the litigation.]

The commission went on to say that it will regulate utility rates in accordance with the law; and that people are entitled to receive just treatment from the commission "without obligating themselves to divide that which is theirs with those who would stir up and foment constant and perpetual rate litigation and strife for their own selfish gain."

Figures of the Week

Freight Car Loadings

Loadings of revenue freight in the week ended August 27 totaled 791,977 cars, the Association of American Railroads announced on September 1. This was an increase of 11,114 cars, or 1.4%, compared with the previous week; an increase of 115,279 cars, or 17%, compared with the corresponding week last year; and a decrease of 26,484 cars, or 3.2%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended August 20 totaled 780,863

cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, August 20			
District	1955	1954	1953
Eastern	122,543	108,861	135,931
Allegheny	149,123	121,298	161,681
Pocahontas	61,950	46,925	60,601
Southern	123,133	113,202	124,338
Northwestern	136,852	115,763	146,242
Central Western	128,468	116,533	127,747
Southwestern	58,794	56,042	60,906
Total Western Districts	324,114	288,338	334,895
Total All Roads	780,863	678,624	817,446
Commodities:			
Grain and grain products	53,052	53,112	51,545
Livestock	6,847	9,089	8,714
Coal	132,583	110,641	137,038
Coke	12,688	6,841	12,939
Forest Products	48,318	39,328	47,468
Ore	88,368	59,037	97,036
Merchandise l.c.l.	63,685	62,621	70,012
Miscellaneous	375,322	337,985	392,674
August 20	780,863	678,624	817,446
August 13	775,397	685,272	807,622
August 6	765,452	667,592	785,349
July 30	795,771	683,417	793,754
July 23	786,433	684,281	780,699
Cumulative total, 33 weeks	23,354,349	21,165,319	24,531,786

In Canada.—Carloadings for the seven-day period ended August 14 totaled 85,258 cars, compared with 78,695 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 14, 1955	85,258	31,770
August 14, 1954	73,856	23,959
Cumulative Totals:		
August 14, 1955	2,416,669	1,003,221
August 14, 1954	2,217,570	893,189

Operations

Taylor Order Extended In Flood-Stricken Area

Due to continued disruption of service resulting from floods in seven northeastern states, the Interstate Commerce Commission has extended the expiration date of Taylor Order No. 57 from August 31 to September 20. The order permits rerouting of traffic in the states of Vermont, New Hampshire, Massachusetts, Connecticut, New York, New Jersey and Pennsylvania (*Railway Age*, August 29, page 8).

MP Plans New Slant On 'Piggyback' Service

The Missouri Pacific will offer a new version of "piggyback" service in an operation which it expects to begin "within the next few months."

Instead of handling the complete truck trailer on a flat car, the MP will, it says, simply transport by rail the demounted container or truck body.

The service will work like this: A tractor of the MP Freight Transport Company will haul the "container,"

mounted on a chassis, to the shipper's loading dock. After loading, the tractor will move the truck to the rail loading point where a small traveling crane will lift the body from the truck chassis to the railroad car. At destination, another crane will lift the body from the rail car back to truck chassis for delivery to consignee's unloading dock.

P. J. Neff, chief executive officer of the MP, says this "new and unusual" operation will, in the MP's opinion, be superior to ordinary "piggyback" service.

SP SWITCHMAN MAKES OWN SURVEY OF FREIGHT LOSS AND DAMAGE

How effective is the careful car handling program?

To answer that question, so far as it concerns the Southern Pacific's Pacific lines, Donald Q. Miller, an SP switchman, has conducted his own survey among his fellow switchmen; and, on the basis of its results, has drawn up his own specific and detailed program on "How to Sell Careful Car Handling to Switchmen."

Mr. Miller's questions, somewhat paraphrased, and replies received from 28 switchmen working in 19 SP yards, gave the following results:

(1) Are Careful Car Handling Meetings held in your yard? Yes, 24; no, 4.

(2) When was the last such meeting held? From three years ago to February 1955.

(3) Are the meetings effective? Yes, 16; no, 7.

"Our type of service will not require use of any special type of railroad equipment for train movement," Mr. Neff said. Flat-bottom gondola cars will be used. Carriage of the dead weight of wheels will be eliminated, and the containers will anchor to the railroad car by "self-contained devices," he added.

Initially, the MP will offer the new service between St. Louis and Kansas City.

The MP "container" will be 32 ft long, 8 ft wide and 8 ft high.

(4) Do you feel the individual conducting the meetings is fully familiar with switching problems? Yes, 10; no, 13.

(5) Are discussion and free exchange of ideas from switchmen encouraged at the meetings? Yes, 13; no, 9.

(6) In your opinion, are Careful Car Handling posters effective? Yes, 16; no, 12.

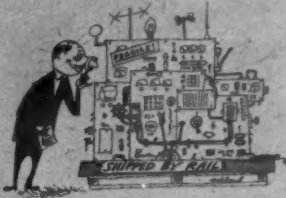
(7) Are you aware of the AAR Careful Car Handling program? Yes, 12; no, 16.

(8) Do supervisors encourage suggestions? Yes, 12; no, 16.

(9) Have you made suggestions on ways and means to reduce loss and damage? Yes, 13; no, 14.

(10) What do you think of the present method of training student switchmen? Good, 4; fair, 3; unsatisfactory, 21.

Damage Prevention



... how to sell it
to switchmen

Donald Q. Miller
Switchman
Southern Pacific Company

RESULTS of Mr. Miller's survey on effectiveness of the Careful Car Handling program, and his own detailed suggestions on how to "sell" careful car handling to switchmen and how to train student switchmen, are presented in an attractively printed booklet. Copies are available from him at 198 Del Norte way, San Luis Obispo, Cal. As reported in *Railway Age* August 29, page 10, Mr. Miller has just received from the Federation for Railway Progress a fellowship covering a year of advanced study in transportation at any accredited university.

Strike Threatens PRR

President Michael J. Quill of the CIO Transport Workers Union had called a strike of non-operating employees of the Pennsylvania as this issue was going to press. The strike had been scheduled to begin at midnight, September 2. President Eisenhower, meanwhile, created an emergency fact-finding board to study and recommend a solution to the controversy.

Competitive Transport

CAB Advised to Extend Air Freight Authorities

A Civil Aeronautics Board examiner has proposed extension of operating authority for two all-freight airlines.

Examiner J. S. Keith proposed to the CAB that it approve the applications of Riddle Airlines and American Air Export & Import. Riddle, which now has rights between New York City and Miami, would be allowed to extend its operations to Boston on the Atlantic Coast and to Cleveland, Detroit and Chicago from Miami, under the recommendations.

American Air Export & Import, an irregular carrier, would be authorized to serve New York City and Detroit from New Orleans, with service to Atlanta, Birmingham and Chicago required as part of the authorization. The authorization would be for five years.

CAB Keeps Domestic Air Forwarders in Business

The Civil Aeronautics Board will renew for an indefinite period the operating authorities of domestic air freight forwarders which were parties to the board's Air Freight Forwarder Investigation.

This decision was announced August 31, the board holding that the forwarder operations should continue because of the public interest and increasing use of the service by shippers. The board also found that co-operative shipper associations should be granted indirect air carrier authorizations for an indefinite period.

Traffic

Bureau Revises Figures—Railroads Lose Passengers

The railroads lost even more of their meager 5.6% "share" of intercity passenger traffic reported last November

in revised figures that have been released by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.

Preliminary estimates as reported in *Railway Age* November 22, page 34, based on an article in the ICC bureau's "Monthly Comment," showed the railroads with 32.3 billion passenger-miles for 1953 for the 5.6% "share."

In a special report on intercity passenger-miles, the bureau has now put the railroad "share" at 5.5%, or a total of 32.26 billion passenger-miles.

The "lost" one-tenth of 1% went to the private automobile in the later report. Private autos accounted for 503.6 billion passenger-miles in 1953, the bureau reported, for an 86.36% "share." This percentage was reported as 86.1% in the November article, the further change being due to a downward revision of intercity bus traffic—from a 5.1% "share" to one of 4.87%.

Advisory Board Estimates 5.2% Low for 1st Quarter

Shippers Advisory Boards underestimated first quarter car loadings for 1955 by 5.2% according to a comparison of the forecasts with actual loadings made by Arthur H. Gass, chairman, Car Service Division, Association of American Railroads.

Ten of the boards submitted underestimates ranging from 1.9% for the Great Lakes board to 19.7% for the board in the Ohio Valley. Overestimates were submitted by the Atlantic States board, 0.6%, the Southeast board, 0.7%, and the New England board, 2.3%.

By commodities, there were 17 underestimates, which ranged from 0.7% on grain to 23.2% on vehicle parts; and 15 overestimates, ranging from

0.1% on frozen foods, fruits and vegetables to 36.7% on hay, straw and alfalfa.

Organizations

Bandy Named to TAA's New Membership Post

Darrell Bandy, director of the Treasury Department's Savings Bond division in Minnesota, has been appointed to the newly created position of vice-president—membership for the Transportation Association of America.

Harold F. Hammond, TAA executive vice-president, said Mr. Bandy will devote his attention to member relations, leaving Mr. Hammond free to concentrate on major association objectives.

TAA recently moved its general offices in Chicago from 130 North Wells street to 6 North Michigan avenue.

Passenger Officers' Group To Celebrate 100th Year

Celebration of the association's 100th anniversary will highlight the 1955 annual meeting of the American Association of Passenger Traffic Officers, to be held September 22-25 at the Chateau Frontenac, Quebec. A special exhibit on the organization's history and growth is planned.

James E. Parks, assistant professor of research at Harvard University, will be among the speakers. He will offer some "Observations on Your Passenger Traffic," based on a study he has been making in the past year.

Mechanical Groups Prepare Chicago Meetings, Exhibits

Many phases of car and locomotive operation and maintenance are scheduled for discussion at the 1955 meetings of the Coordinated Mechanical Associations in the Hotel Sherman, Chicago, September 12-14. During the meetings, a comprehensive exhibit of railroad mechanical devices will be displayed under auspices of the Allied Railway Supply Association. The Air Brake Association will be addressed by representatives of Westinghouse Air Brake and New York Air Brake. F. S. Hales, president of the Nickel Plate, will address the Car Department Officers. The Locomotive Maintenance Officers Association will have two speakers from the ICC: Owen Clarke, member of the commission, and John A. Hall, recently appointed director, Bureau of Safety and Service locomotive inspection. D. A. Fawcett, vice-president, New York Central, will address the Railway Fuel & Traveling Engineers Association.

Approximately 125 exhibitors will have products and equipment displayed

L&N DROPS CENTURY-OLD PASSENGER RUNS

A pair of passenger train runs that lasted nearly 104 years have been dropped by the Louisville & Nashville.

Trains 15 and 20 made a daily round-trip over 98 miles of line between Louisville and Lexington, Ky., via Lagrange and Eminence. In their final years, they were handled by diesel power and their equipment included air-conditioned coaches.

Back in 1851 the runs were known as "First Train" and "Second Train." When a cutoff via Shelbyville was constructed in 1896, service on the Lagrange route became purely a local affair.

Interesting fact: In 1851 running time between Louisville and Lexington was 5½ hours and the fare \$3 one way. When the trains were taken off, running time was two hours less and the one-way fare was \$2.33—67 cents less!



A HAZARDOUS CONDITION in Highland Park, Ill., was alleviated by unusual warning signs erected at this grade crossing by the Chicago North Shore & Milwaukee. In heavy traffic, cars awaiting the U. S. Highway 41 stoplight (background) accumulate until they block the North Shore's crossing. The same situation builds up when motorists await trains on the Chicago & North Western's freight line (a hundred feet or so behind the

camera). The North Shore gates here are automatic and trains from the north approach the crossing on a long reverse curve that limits the motorist's visibility. The two warning signs (the one for westbound motorists—like the Cadillac—being out of sight at the extreme left) are painted a high-chrome yellow with black lettering, except that the word "warning" is in silver Scotchlight against a bright red field.

in 352 booths at the Allied Railway Supply exhibit.

The Production Engineering Show, and the Machine Tool Show of the National Machine Tool Builders Association, will be in progress in Chicago at the same time. The Machine Tool Show is at the International Amphitheatre, and the Production Engineering exhibit is on the Navy Pier. The 326 manufacturers represented at the two latter shows are displaying 441 machine tools and allied equipment demonstrating the diversity of automatic operations and control available to all industry today.

Each day of the three-day convention Simmons-Boardman will publish a *Mechanical Daily* produced by the staffs of *Railway Locomotives and Cars* and *Railway Age*. These three editions will report the convention activities and registration along with coverage of the Allied Railway Supply exhibit and the Machine Tool Show.

"What's Ahead in Transportation" will be the theme of the 32nd annual meeting of the **Associated Traffic Clubs of America**, to be held at the Cleveland Hotel, Cleveland, September 18-21. Participating in a discussion of this subject on the morning of the 20th will be Alfred E. Perlman, president, New York Central; W. A. Patterson, president, United Air Lines; Neil J. Curry, president, American Trucking Associations; and Admiral Lyndon Spencer, president, Lake Carriers' Association. At a luncheon sponsored by the Traffic Club of Cleveland,

E. G. Plowman, vice-president, traffic, United States Steel Corporation, will outline industry's place in the transportation picture. Harold E. Stassen, special assistant to President Eisenhower, will speak at the annual dinner on the same day.

The 32nd annual sales meeting of the **American Association of Railroad Ticket Agents** will be held at the Sheraton Plaza Hotel, Boston, September 26-30.

Speakers at the annual meeting of the **American Railway Magazine Editors' Association**, at Colorado Springs, Colo., September 28-October 1, in addition to those already announced (*Railway Age*, August 1, page 11), are Alan Johnson, manager, Atomic Energy Commission operations at Idaho Falls, Ida., who will speak on use of atomic power for locomotion; Ray Scott, general secretary-treasurer, Brotherhood of Locomotive Firemen & Enginemen, on railway labor's support of principal aims of the Cabinet Committee's recommendations; and Ted O'Meara, editor, *Tracks* (C&O), who will report on the third European Congress of Industrial Editors, which he recently attended at Copenhagen, Denmark.

The 36th annual award of the E. H. Harriman Memorial Medals and Memorial Certificates to railroads whose accident prevention performances were outstanding during 1954, will be made by the **American Museum of Safety**

at a reception and dinner at the Hotel Roosevelt, New York, September 15.

The semiannual meeting of the **Western Association of Railway Tax Commissioners** will be held at French Lick Springs Hotel, French Lick, Ind., September 14-15.

The 73rd regular meeting of the **Allegheny Regional Advisory Board** will be held at the Bedford Springs Hotel, Bedford, Pa., September 14-15. Speaker at a luncheon on the 15th will be Ralph H. Moore, president, Eastern Bituminous Coal Association.

Supply Trade

Paul F. Gutmann, Jr., assistant chief mechanical engineer, **Scullin Steel Company**, has been appointed chief mechanical engineer.

Frederick M. Grauer, who was associated with the new products department of **Budd Company**, has been elected vice-president of **Continental-Diamond Fibre**, division of **Budd Company**, in charge of its marketing program.

The **Van der Horst Corporation** has purchased industrial property at 2610 South Shields avenue, Chicago, consisting of 37,000 sq ft of manufacturing facilities and 15,000 sq ft of yard space. It will establish a plant there, which is expected to be in production early in 1956.

Fred Adams, assistant to sales manager, industrial division, **Colson Corporation**, has been named assistant sales manager at Elyria, Ohio. **E. L. Messmer**, sales representative at New York, has been promoted to branch manager there, succeeding **J. D. Ramsey**, who has resigned to become a franchised Colson dealer for the state of Florida.

A new company, **Brantford-Holan, Ltd.**, has been formed to manufacture, assemble and market Holan utility bodies and power equipment exclusively for Canada. It is jointly owned by **J. H. Holan Corporation**, Cleveland, and **Brantford Coach & Body, Ltd.**, Brantford, Ont.

George T. Morse, formerly with **U. S. Gypsum Company**, has been appointed vice-president and director of sales for **Smooth-on Manufacturing Company**, Jersey City, N.J. He will be concerned primarily with sales development of their new epoxy resin casting and repair compounds.

Two new one-story buildings will be constructed on the 17-acre site of the **Crane Packing Company**, Morton Grove, Ill. The new structures, which will house an extensive research laboratory, office and cafeteria, mark



ARTHUR H. RINGHOLM, staff assistant for product sales, Kaiser Aluminum & Chemical Sales, who has been appointed manager of railroad sales, at Chicago.

culmination of the company's three-year program of relocation from Chicago to Morton Grove. A 126,000-sq ft factory building is already in operation at the new site. The new buildings will give the company an additional 46,500 sq ft of building space there.

Pittsburgh Plate Glass Company has announced plans for construction of an ultra-modern Glass Research Center, on a 52-acre site in Harmar Township, Pa., near Pittsburgh. It will consist of two separate buildings, featuring virtually all-glass exteriors—a development and product control building which is expected to be completed next February, and a basic research building, construction of which will probably start late this year.

Heyl & Patterson, Inc., have appointed **George M. Meriwether**, of Birmingham, Ala., as sales representative in six southern states for special materials handling equipment, including H. & P. coal and ore bridges and railroad car dumpers.

Broderick & Bascom Rope Co. has moved its eastern branch and warehouse to larger quarters at 270 North st., Teterboro, N.J.

The Radio division of **Bendix Aviation Corporation** has awarded contracts for construction of a \$2-million engineering building at Towson, Md., to be completed by July 1956. The additional 100,000 sq ft of floor space will be devoted to expanded research and development on commercial and military radar and other communication and navigation devices.

The **Fruehauf Trailer Company** has been given exclusive manufacturing and distribution rights for the Clark Mobilvan system, a method developed by **Clark Equipment Company** for transporting large container shipments of merchandise.

The system is based on use of Clark fork-lift trucks designed auto-

matically to lock a van or container securely to the bed of a railroad flat car or the chassis or flatbed of a trailer or truck. The container can also be used for overwater shipments. At its destination the container can become a storage structure for contents not immediately needed.

Under terms of the new agreement, Fruehauf will manufacture the vans at its various plants and Clark will produce locking mechanisms, for Fruehauf, at its Battle Creek, Mich., plant. The Mobilvan system will be marketed through Fruehauf's nationwide network of factory branches.

Roland E. Olson has been named representative of **T-Z Railway Equipment Company** at Minneapolis.

The **Matisa Equipment Corporation** has announced that construction of its new assembly plant and warehouse has advanced to a point where the company is now occupying its new offices at the plant location, 1021 Washington Avenue, Chicago Heights, Ill.

Joseph S. Gowland and **Elmer H. Schmierer** have been appointed sales representatives of the agricultural sales division, **Pacific Coast Borax Company**, and have been assigned, respectively, to the Chicago and Kansas City, Mo., offices.

Joe W. Morgan, assistant sales manager, eastern industrial truck division of **Hyster Company**, at Danville, Ill., has been promoted to sales manager of the eastern tractor equipment division, at Peoria, Ill.

C. Allan Fee, secretary of **ACF Industries**, has been elected vice-president and secretary.

Budd Company has announced it will manufacture, sell and service the gamma radiography equipment and sources previously produced by the **Gamma Corporation**, Mansfield, Mass.

Handlan, Inc., St. Louis, manufacturers of lamps, lanterns and torches, have appointed **John H. Graham & Co.**, New York, as exclusive sales representatives.

New Facilities

New Reservations System Will Cover All of NYC

The New York Central will extend "Centronic," electronically controlled central reservation system, to its lines west of Buffalo and to the Michigan Central. President A. E. Perlman announced last week.

The railroad previously had announced that "Centronic" will be installed on its lines east of Buffalo (*Railway Age*, July 18, page 10).

Installed by the Teleregister Corporation, Stamford, Conn., the NYC's "Centronic" will, when completed, be the largest electronic reservation system, Mr. Perlman said.

Magnetic storage drums in the New York, Cleveland and Chicago areas will store information on up to 600,000 individual accommodations. NYC officers believe this will be the largest "random access memory" in commercial use.

Mr. Perlman said "Centronic" is the Central's answer to a problem that has vexed travelers and the railroad alike—lines at ticket windows.

"We believe," he added, "that 'Centronic' will produce tangible benefits through improvement of service to our customers, use of a higher percentage of space, and savings through greater efficiency."

Basically, the "Centronic" system consists of an electronic device for storing information on available, reserved and sold accommodations, and a means for giving or changing this information upon call from remote ticket-selling locations. The NYC system will consist of three electronic installations.

The "Centronic" will store 12,000 accommodations each day for 31 days, plus an additional storage of 12,000 for five days, enough for all reservations made from one to seven months in advance.

The NYC believes future applications for "Centronic" include handling of all coach traffic, train information, fare information, printing of tickets and automatic ticket accounting.

El Paso Station Has an Automatic Train Announcer

An automatic train announcer, for calling arrivals, departures and destinations of trains, has been installed by the Southern Pacific at the El Paso union passenger depot. The equipment is one of the first tape recording systems to be used by a railroad to call trains on an automatic basis. The announcer utilizes 20 miniature magnetic tape recorder units, each capable of recording, playing back or being erased. Each unit is enclosed in a cartridge type holder, about the size of a pack of cigarettes. The entire train-announcing equipment is housed in a metal cabinet 36 in. by 24 in. by 24 in. with a plexiglass front so that operation can be viewed by the traveling public.

To record an announcement, the operator places one of the tape recorders in the position marked "Record" and presses a button. When recorded, the message can be played back and monitored locally. To announce a train arrival or departure, the operator pushes a button associated with the specified announcement, and the recorder will play through to the start position. The most effective announcements at El Paso are first made in English, then in Spanish, and then repeated in English.

Advantages—The automatic train announcer has two distinct advantages:



EACH AUTOMATIC TRAIN ANNOUNCING RECORDING UNIT, as shown in Mr. Albertson's left hand, is about the size of a pack of cigarettes.

(1) It provides more time for the stationmaster or other authorized attendant to carry out other phases of work in the terminal; and (2) recordings permit the traveling public to become accustomed to the same voice.

Supplementing the automatic train announcer is a new public address system that has been inter-connected to carry the recorded announcements, and which can be used for routine and emergency messages. The railroad has also installed a talk-back and paging system serving platforms throughout the station area that has proved effective in speeding up train movements in the terminal.

The equipment was engineered and installed under the direct supervision of J. N. Albertson, assistant superintendent of communications, and under the direction of W. L. Fagley, superintendent of communications, Houston. The automatic train announcer was built by the Mohawk Business Machine Company of New York, and the public address and talk-back equipment provided by the Electronic Communication Equipment Company, Chicago.

Financial

Firm Seeks Return to Amortization Accounting

Claiming that the present accounting system required of railroads "distorts" their earnings, an accounting firm has petitioned the Interstate Commerce Commission to return to methods which reflect accelerated amortization of equipment and facilities.

Arthur Andersen & Co., filing its petition independently while reporting it audits the books of many railroads, said that the system now in use has the effect of inflating earnings while

fast write-off programs are in effect. Conversely, the present system would deflate earnings after the fast amortization period passes, the firm stated.

The ICC ordered the railroads to discontinue amortization accounting in 1951—a move which was protested extensively by many roads. The roads had been allowed to use amortization accounting methods during World War II and the emergency period immediately following.

Andersen & Co. held that the commission-sanctioned procedures are faulty and asked for an inquiry by the ICC to be followed by revocation of its order in Docket No. 30920. The petition stated that railroad earnings as now reported are excessive because they do not include charges against income equal to the federal income tax deferred to later years through quick write-offs of equipment or facilities. The company suggested to the commission an alternative order which it said would remedy this situation.

The company stated that railroad earnings for 1954 had been inflated by as much as 72% (the Pennsylvania), 64% (Atlantic Coast Line), 58% (Louisville & Nashville), 56% (Baltimore & Ohio), and 45% (Southern Pacific), due to present accounting methods.

Revenue Basis for Class I Roads Raised to \$3 Million

The minimum annual-revenue requirement for designation as a Class I railroad will be increased from \$1 million to \$3 million, effective January 1, 1956. All roads with annual gross of less than \$3 million will be Class II, so there will be only two classes instead of the present three.

The Interstate Commerce Commission has so ordered after considering views submitted by interested parties in response to the commission's notice of its intention to issue the order (*Railway Age* June 20, page 5).

The new set-up will remove 13 roads from the Class I group, but it will bring in four which would now be in except for the fact that there have been no reclassifications for several years. The effect on aggregate annual revenue of the Class I group will be slight. The total for the new group is expected to be 0.11% less than that of the present group.

The four new Class I roads will be: Litchfield & Madison; Savannah & Atlanta; Minnesota, Northfield & Southern; Carolina & Northwestern.

The commission order stipulates that the classification shall be based on the average annual operating revenues for the three-year period ended with the calendar year 1955; "and, subsequently, if at the close of any calendar year the average of the annual operating revenues for the latest three-year period is greater or less than the amount applicable to the class in which the carrier has been reporting, its class for the second succeeding year shall change accordingly and it shall remain in such

class for a period of not less than three consecutive years."

The order also provides that, in applying the classification to a switching and terminal company which is operated as a joint facility, the sum of the annual railway operating revenues, the joint facility rent income, and the returns to joint facility credit accounts in operating expenses, shall be used in determining the class."

Big Option for WC Stock Is Obtained by Heineman

An option to purchase a "very substantial interest" in common shares of the Wisconsin Central has been acquired by Ben W. Heineman, chairman of the Minneapolis & St. Louis.

The WC, operated by the Soo Line, is controlled by that road and the Canadian Pacific. These roads hold about 52% of outstanding WC shares. The option held by Mr. Heineman is for 90,000 shares, or approximately 44%, and would not amount to controlling interest in the road.

Mr. Heineman said last week that he is studying the WC situation "very carefully," and as yet no decision has been reached on whether he will exercise his option, which expires September 30.

Wisconsin Central shares are traded "over-the-counter" in New York, and the stock has recently sold at around \$70 a share.

The Heineman option was acquired from the so-called "Watner group," headed by Abraham Watner, a director of the WC.

Should Mr. Heineman decide to exercise his option and buy the WC shares, the acquisition would be subject to approval by the Interstate Commerce Commission.

"Quick Assets" Up 13.2% In Year, ICC Bureau Says

"Quick assets" of Class I railroads were up 13.2%, or \$211.3 million—from \$1,602.0 million to \$1,813.3 million—in the 12-month period May 31, 1954 to May 31, 1955. The later figure was the equivalent of 97.7% of the current liabilities, compared with coverage of 81.6% a year earlier.

"Quick assets," according to the Bureau of Transport Economics & Statistics, Interstate Commerce Commission, which reported the figures in its "Transport Economics," include cash and temporary cash investments.

Net corporate working capital (total current assets less total current liabilities) for Class I roads increased from \$1,355.4 million on May 31, 1954, to \$1,525.4 million a year later—a rise of 12.5%. Excluding materials and supplies, the net working capital increase would be 59.3%—from \$530.5 million to \$845.2.

The material and supplies account decreased from \$824.9 million on May (Continued on page 54)

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Wabco's ability to bounce back and regain its original contour after deflection has made it amazingly successful in air brake packing cups, as well as seals and gaskets. It is this unmatched resiliency that has reduced brake system leakage to a previously unattainable minimum. It made it possible to extend maintenance intervals because of the longer service life.

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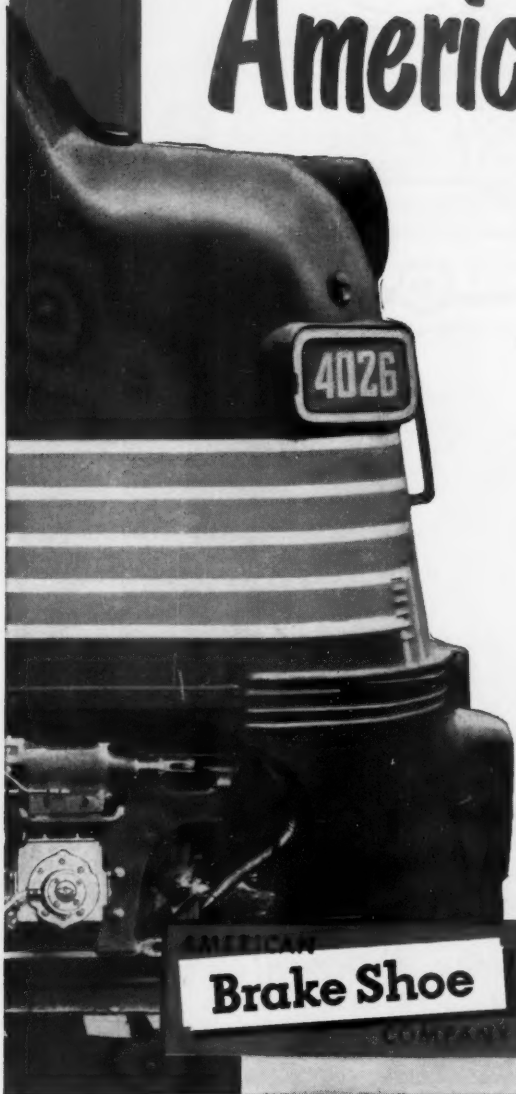
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American Brake Shoe Controller



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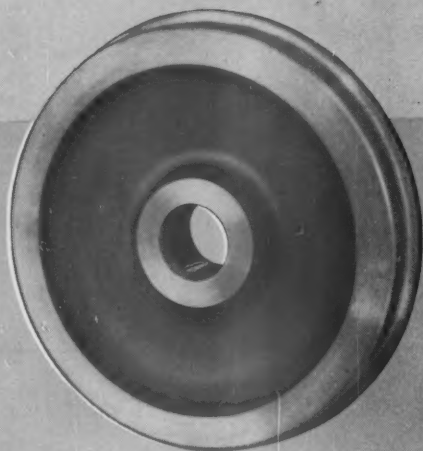
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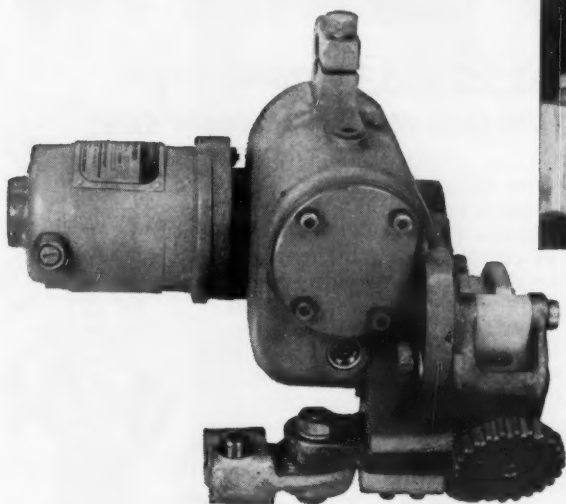
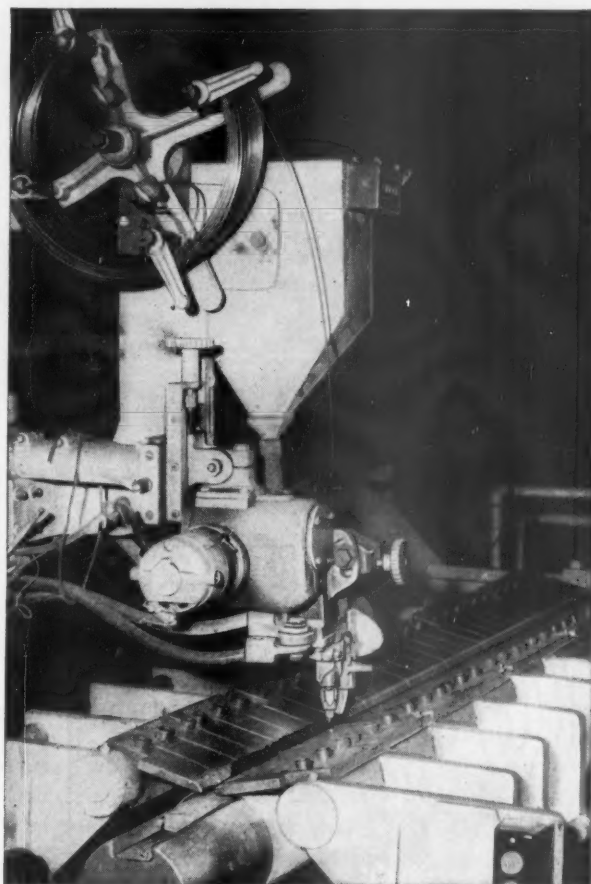


CUT maintenance costs on tough welding jobs with the **New UNIONMELT DSH** welding head

Trade-Mark


Here's the low cost, submerged melt welding head that saves maintenance costs on tough welding operations. The new UNIONMELT DSH head combines the flexibility of the lighter units with the ruggedness needed in heavy-duty welding machines. Large, sturdy gears and bearings give long, trouble-free service though work may involve frequent starts and stops and feeding heavy electrode wire. Simple controls and mounting arrangements make the DSH head easy to operate and maintain.

UNIONMELT welding joins thin metals at speeds up to 200 in. per minute or makes one-pass welds with a 3-inch penetration if desired. If you have a production job in your plant that requires high-quality welds made at high speeds, ask your nearest LINDE Office today for more information about UNIONMELT welding. A LINDE Engineer will be glad to help you plan your UNIONMELT installation for high-speed, production welding.



With the new UNIONMELT DSH head now available in five output speeds, you can select the best unit you need for making high-quality low-cost welds at the highest welding speeds.

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A Division of Union Carbide and Carbon Corporation

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Supplying to railroads the complete line of welding and cutting materials and modern methods furnished for over forty years under the familiar symbol . . .

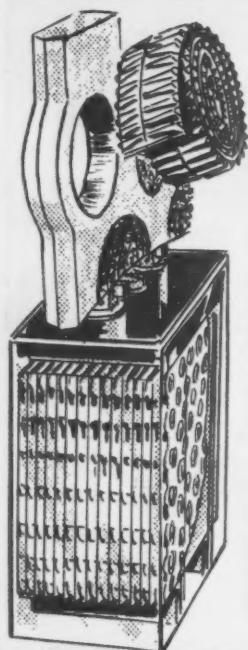
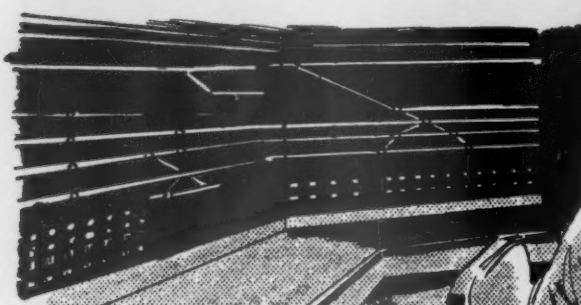


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CONTINUOUS, TROUBLE-FREE SIGNAL SERVICE TO KEEP TRAINS RUNNING SAFELY, ON TIME, IS ASSURED WITH EXIDE-MANCHEX SIGNAL BATTERIES. THIS MEANS MORE PAYLOAD, MORE PROFITS! WITH EXIDES, THE COST TO OWN-OPERATE-MAINTAIN IS PROVED LOWER. THEY ARE YOUR BEST POWER BUY—**AT ANY PRICE!**



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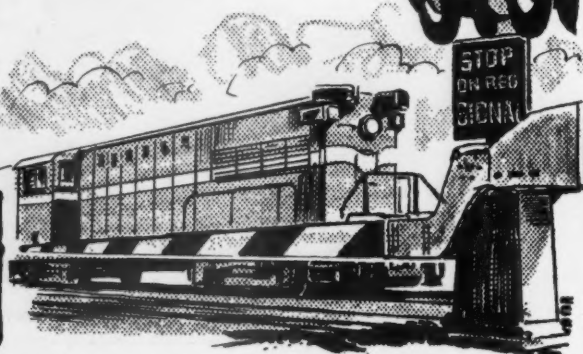
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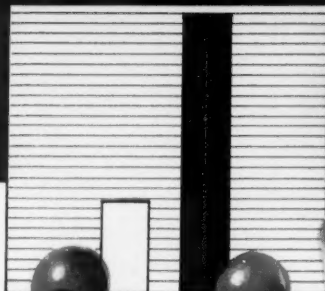
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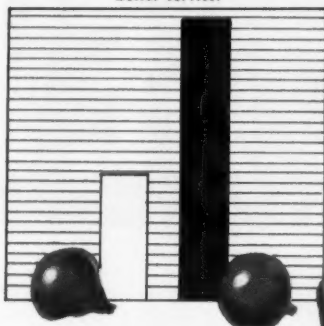


Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

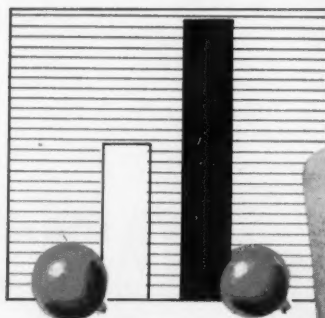
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Filter cartridges may have "worm holes" too. Because WIX Cartridges don't channel, they give longer, better service.



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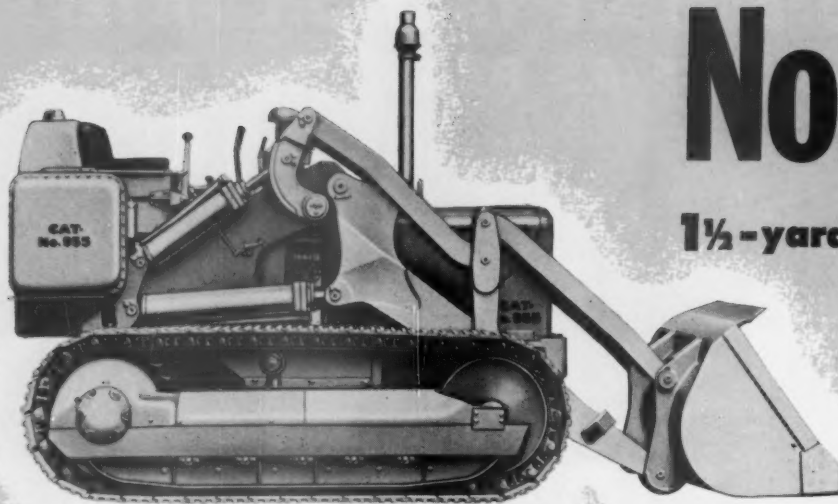
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No. 955

1½-yard capacity

*Caterpillar
announces*

2 NEW



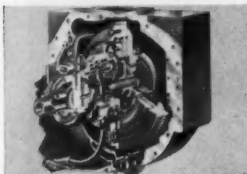
No. 933

1-yard capacity

"BIG-PRODUCTION" FEATURES OF THE NEW NO. 955 AND NO. 933

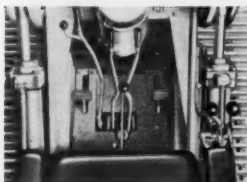


40-DEGREE BUCKET TIP-BACK AT GROUND LEVEL. Large tip-back at low bucket height results in larger loads every pass—bigger production per day!



NEW OIL-TYPE CLUTCH. Stands up under continuous, repeated use. Cuts maintenance costs and time two ways: (1) Clutch adjustment, while easy, is seldom required. (2) Plate replacement is often unnecessary even at engine overhaul.

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NEW 3-GROUSER TRACK SHOES. Tested and proved on tough jobs, they deliver better traction—longer life.

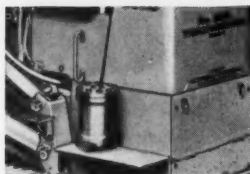
OPTIONAL STARTING. Your choice of 6-volt electric starting for starting engine or 24-volt direct electric starting—from the seat, either way.

VERSATILE ATTACHMENTS. Your job range is increased by a variety of buckets and other useful attachments.

BRIEF SPECIFICATIONS

	No. 955	No. 933
Flywheel HP at sea level	70	50
Bucket capacity, cu. yd.	1½	1
Bucket tip-back at ground level, degrees	40	40
Bucket tip-back at max. lift, degrees	47½	48
Dumping height (center of hinge pin to ground)	128"	118½"
Weight (approx.) lb.	21,480	15,500

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MODERN HYDRAULIC SYSTEM. Full-flow hydraulic system filter protects moving parts against abrasive particles in fluid. Filter handily located for easy replacement of element.

Hydraulically balanced vane-type pump insures delivery of full volume and pressure of oil for thousands of hours. Operating valves in tank provide maximum protection against damage and dirt. Closed hydraulic system—no vents or breathers—prevents entrance of dirt.



HIGH REACH. Plus strong box section arms for rugged service. Box-type cross brace prevents twisting or bending.

PLENTY OF POWER. Power is ample to "bury" the bucket and provide fast lifting action and positive dumping under all load conditions.

BALANCED UNITS for BIGGER PROFIT!

Designed from the ground up as excavating and loading machines, these two new CAT*-built Traxcavators* are balanced for bigger production at lower cost. Built and backed by one manufacturer, they give you all the advantages of single manufacturing responsibility. With practical, advance-design features, they're engineered to *outproduce* ordinary tractor-shovels of the same capacity. You'll find these units the handiest tools in your line-up. Get the money-making picture from your Caterpillar Dealer—ask for a demonstration!

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

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**NEW
BIG-PRODUCTION
TRAXCAVATORS**

ANOTHER EXAMPLE OF CATERPILLAR LEADERSHIP IN ACTION

THANKS TO GOULD RESEARCH



WE SEPARATE

Oxide Particles

40

MILLIONTHS

OF AN INCH

IN SIZE!

TO GIVE YOU GREATER BATTERY CAPACITY!

Illustrated above is a Thompson Classifier in the Gould Battery Research Laboratory at Depew, N. Y. It is used to separate, by flotation, particles of lead oxide so small that they'll pass through the finest sieve made.

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This method of particle separation quickly determines which oxides are best for various types of Gould Batteries. Another reason why you get better batteries from Gould through research.



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for Air Conditioning
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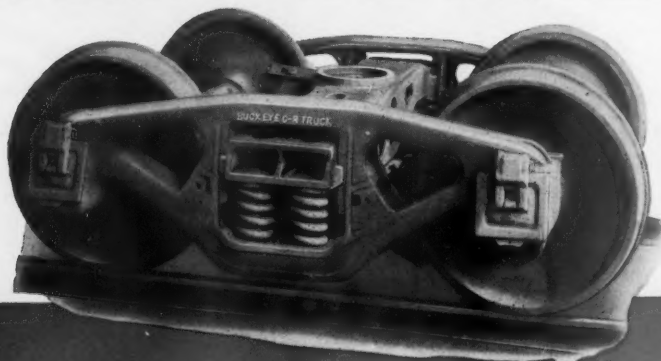
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- Integral box side frames with Buckeye inverted U-section tension members.
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- Symmetrical friction wedges of hardened cast steel with full width, long wearing bearing surfaces.
- Low rate friction wedge springs for uniform action over a long period of service.
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Safe,

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Keep your eye on a current example of railroad foresight
... the Pennsylvania Railroad in cooperation with the Rail-Trailer Company
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It's the first long-distance service of its kind.

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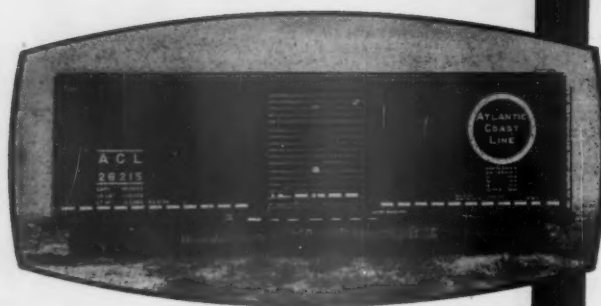


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5 GOOD REASONS FOR REFLECTORIZING YOUR ROLLING STOCK with **PRISMO**



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Reflectorize with gleaming Prismo. Apply all-weather, all-hour visibility to your rolling stock, markers and signs ... make them safer by letting them be seen ... overcome the serious problem of nighttime grade-crossing accidents!

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Don't let the darkness hide your identification! Let the name of your road and your slogans be seen "after hours" by applying a coat of glittering Prismo. Tremendous attention value to your name gleaming along in the night.

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Automobiles running into the sides of rolling stock, at night, accounted for 32% of all railroad accidents in 1948-51 ... have caused a sharp increase in insurance rates. Apply highly-visible Prismo, increases safety at crossings, reduces your insurance rates!

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When your rolling stock is marked with shining Prismo there's no trouble making identification at the "hump". The brilliant gleam of Prismo reflects car number, etc. from long distances in all kinds of weather.

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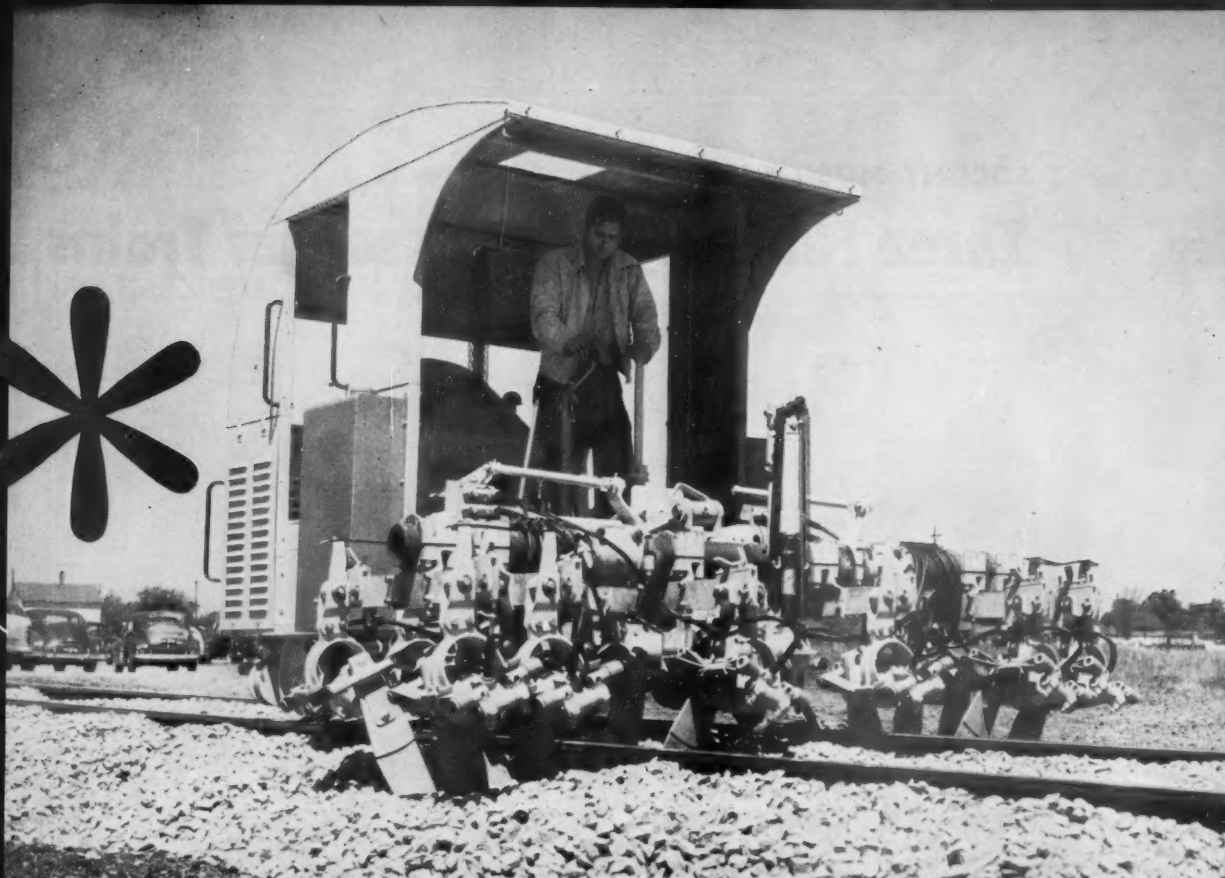
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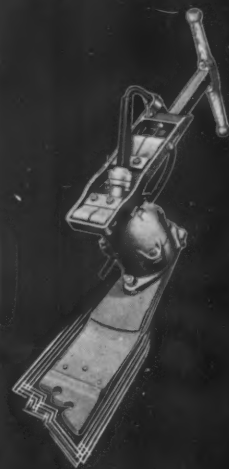
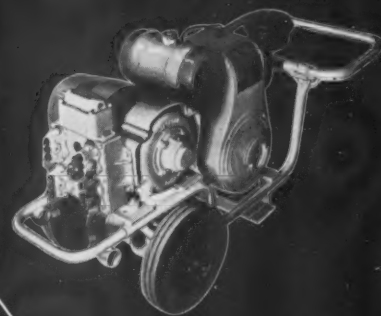
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Unsurpassed for putting up track of finest uniform quality in any lift from moderately low to high. Initial cost is far less than any other on-track tamper.

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Model M-22 Power Plant serves 2 to 4 tampers, is thoroughly reliable, easily portable. Also serves well for lighting, emergency signaling and operating other power tools.



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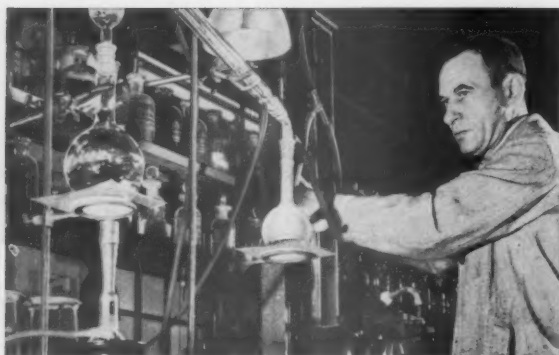
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✓ **CORRECT LUBRICATION**—Since 1947 Socony Mobil has supplied Frisco Railroad with top-quality products and lubrication "know-how"... materially contributed to its record of trouble-free performance and economy of operation.

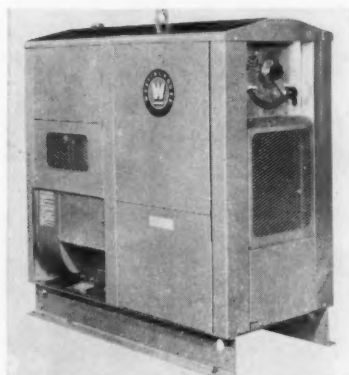
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26 Broadway, New York 4, N. Y. • 59 East Van Buren Street, Chicago 5, Ill.



What's New in Products



Engine-Driven Welder

A series of generator type welders, powered with 20-hp Onan air-cooled, four-cylinder gasoline engines, are completely self-powered, with electric starting, and have internal fly-ball governors with a variable-speed control attachment.

These welders, available in current ranges from 30 to 350 amp, a-c or d-c, have infinite current adjustment steps. The various models include a number of different features. One d-c model can be converted into an a-c power plant with a conversion switch.

One a-c model has a 110-volt d-c outlet for operating universal tools, and another produces high frequency that can be used for Heliarc inert gas welding. *Westinghouse Electric Corporation, Box 2099, Pittsburgh 30 •*

Supersolv Detergent

Supersolv is a granular detergent which is mixed with water and used in steam cleaning equipment to remove oil, grease and oily soil from both solid and porous surfaces. Removal is through displacement action, and the soil once lifted will not re-deposit even though the surface is not rinsed.

It can be used for cleaning machinery, greasy concrete floors, painted floors, and concrete and brick building faces.

Removal rate is increased with heat, although the detergent solution can be used cold. The solution is prepared by adding two pounds of Supersolv to each 25 gal of water. It is claimed that this detergent is non-toxic, non-corrosive, and non-flammable. It is also said to be harmless to clothing, tools and painted and metal surfaces. *Kelite, 1250 N. Main st., Los Angeles 12 •*



Lifting Magnet

The use of aluminum instead of copper conductors in this 55-in. diameter electric lifting magnet has resulted in a total weight of 5,200 lb. It is claimed that this is a weight saving of up to 25 per cent. The mechanical design is said to make more effective use of the coil winding area giving more favorable weight-to-lifting-capacity ratio. *Electric Controller & Manufacturing Co., 4500 Lee road, Cleveland •*

High Free Lift Mast for More Towmotor Models

Designed to facilitate high stacking in box cars and other low ceiling areas, an optional-feature high free lift mast is now available on Towmotor fork-lift truck models LT-35, 500, LT-50, LT-56, and 500-P. In addition to four other models for which such a mast was previously offered.

Installed at extra cost as original equipment, the assembly provides unusually high free lift before increasing the overall lowered height of the lift truck.

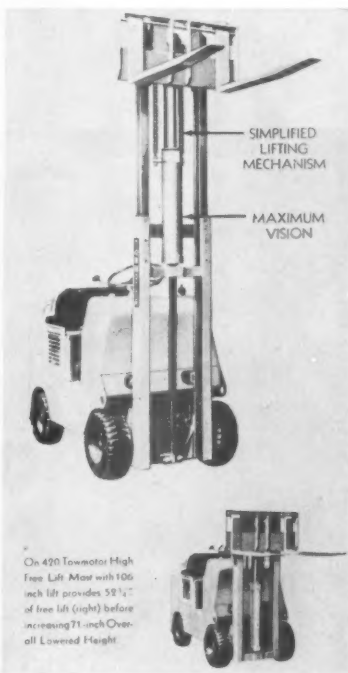
Streamlined construction combined with exclusive mast design assures greater visibility and simplicity of operation throughout the complete range of lift. There is no reduction in load capacity or increase in load lever arm over standard trucks.

Total lifts range from 74 in. to 144 in. for the 400-P, 72 in. to 216 in. for the LT-50 and LT-56, and 74 in. to 160 in. for the LT-35, 390, 420, 460, 500, and 500-P. The entire high free lift mast assembly is interchangeable with the standard Towmotor mast for installation in the field. *Towmotor Corporation, 1226 E. 152nd st., Cleveland 10, Ohio •*

64-Volt D-C Power Supply

A new railroad radio power supply operating directly from the 64-volt diesel battery without any accessory converter unit has been announced. By incorporating two vibrators, one for normal operation and one on standby, with automatic changeover, this single unit is said to provide the same reliable operation obtained by using a separate converter with a-c power supply. Vibrators are the heavy-duty, long life units found in Cornell-Dubilier railroad converters in the field. Two magnetic circuit breakers are incorporated to protect each of the vibrators and to eliminate the need for external fuse boxes and fuses. A special circuit regulates filament voltages within plus or minus 5 per cent of 6.3 volts and thereby insures maximum tube life in the radio equipment.

The new plug-in power supply is designed for use with any standard Motorola railroad receiver and transmitter. The unit is rated at 72 volts input with allowable variations of plus or minus 15 per cent. It should be used with the manufacturer's new companion control head which incorporates an indicator light to show when the auxiliary vibrator is in operation. Transmitters and receivers remain unchanged and are interchangeable with all existing units. *Motorola Communications & Electronics, Inc., Railroad Department, 4501 W. Augusta blvd., Chicago 51 •*



Originated by General American in 1944

**today,
more than
4000
GATX flued-dome
tank cars are
leased to industry**

Back in 1944, General American's research department completed development of a way to make tank cars easier to line, add structural strength, simplify cleaning, and minimize corrosion. This revolutionary development . . . the *flued-dome* tank car . . . was immediately accepted by railroads and shippers.

Now, eleven years later, U. S. railroads haul GATX *flued-dome* cars everywhere carrying products ranging from ammonium nitrate to hydrogen peroxide . . . from glucose to latex . . . from muriatic to sulfuric acid. The GATX *flued-dome* car was another of the many innovations pioneered by General American . . . leader in tank car design.



section showing flued-dome

**Another
rail shipping
success!**

The aluminum tank car is typical of the more than 4000 *flued-dome* cars in the GATX fleet. There are over 200 different types in the fleet . . . designed, built and operated by General American—all leased to industry without capital investment.

GENERAL AMERICAN TRANSPORTATION CORPORATION
135 SOUTH LA SALLE STREET, CHICAGO 90, ILLINOIS
Service Offices in Principal Cities • Service Plants Throughout The Country



Management's Top Duty—Replacements

Management has no duty prior to or more important than providing adequately for its own succession. And there is no duty quite so likely to be neglected—because most men, although they realize they are going to retire or die sometime, would prefer not to think about it.

Even where top managers fully appreciate this problem and try to deal with it—it is hard not to underestimate and underdo the job. For example, the top executive would probably assure himself that a promising successor is in training for each of his "key" subordinates. But this is only a small fraction of the total task. A big railroad has scores of management people retiring or dying every year—hence the need isn't just for a dozen or so men equipped to assume managerial duties. On a big railroad the number runs into the hundreds, and on smaller roads in proportion.

If top management is going to control this situation adequately, it needs quantitative measures—figures like the operating or maintenance ratios—for guidance. A systematic approach toward the solution of this problem may well be the "management personnel inventory" which one railroad has developed, and which has brought to light some surprising information. You don't cure unhappy performance merely by knowing what the operating ratio is and that it is too high—but such information, at least, puts the spotlight on the problem. With any malady, the location of the seat of the trouble is the first step toward its cure.

This particular company collected complete information—age, education, experience, etc.—on separate forms for all of its officer and supervisory personnel, thus initiating a comprehensive management personnel file. It also made records for statistical purposes, dividing management people into four categories—those paid \$12,000 or more; those with salaries \$9,000 to \$12,000; those in the \$7,200 to \$9,000 bracket; those under \$7,200. For convenience, the four groups were labeled (1) "top executives," (2) "back-up group," (3) "middle management," (4) "all other," and supervisors. From a standpoint of age alone the following condition was disclosed:

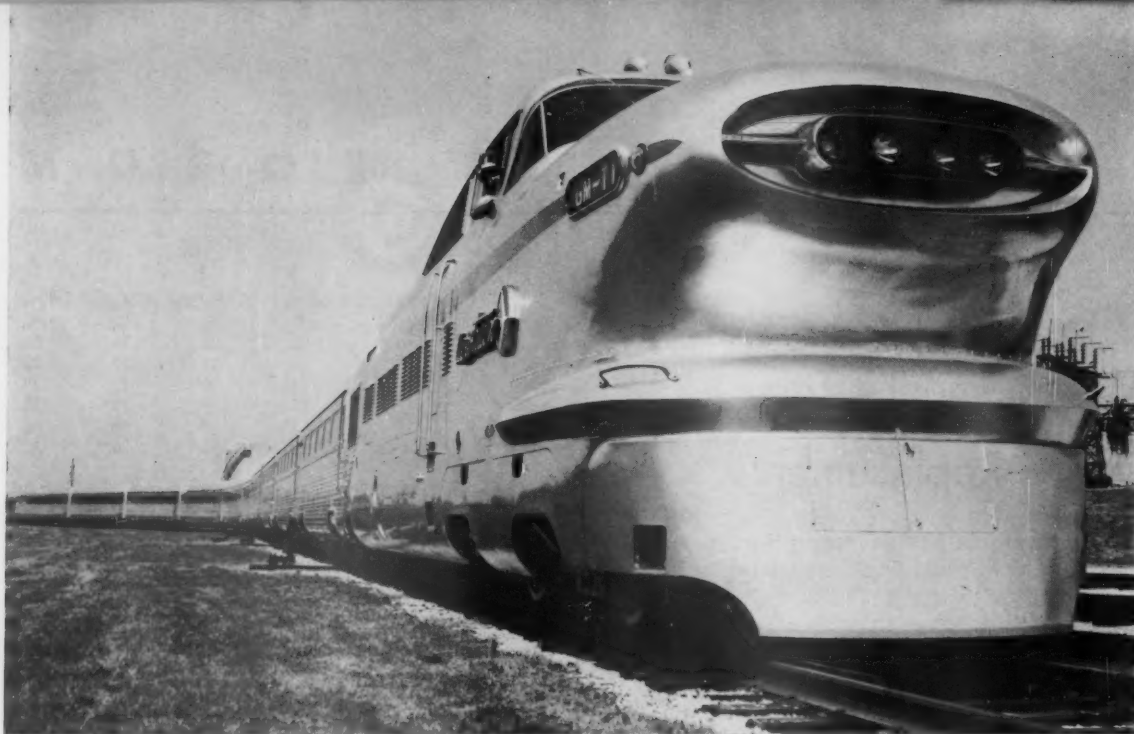
Age	Top Execs.	"Back-up"	Middle Mgt.	All Other	Total
	%	%	%	%	%
60 & over	38	25	24	19	21
55-59	23	24	24	21	22
50-54	17	24	19	19	19
45-49	11	13	13	13	13
40-44	5	7	9	8	8
Under 40	6	7	11	20	17

Considering only retirements—not deaths or resignations—this company will lose 4 out of 10 of its top executives in the next five years and 6 out of 10 of them in ten years. If it wants to replace these 6 men from the "back-up" group, with men not now over 50 years of age, it finds that 7 out of 10 men in the back-up group are too old to meet this qualification. The age distribution of the "middle management" people is practically the same as that of the "back-up" group. In short, the lieutenants are all just about as old as the captains—so where will the new captains come from?

A study of the figures on the college background, if any, of this management force revealed that—in the first three groups (i.e., all but the supervisors)—31 per cent had attended college. This is not an unfavorable percentage, but further study also disclosed that a railroad needs a far higher average of college men today than heretofore for at least two reasons: (1) that most of the abler high school graduates today go on to college (5 times as many as 30 years ago)—hence if you want to get your share of these abler men today, you have to get a much larger ratio of them out of college, rather than out of high school; and (2) present operating techniques are more complex than formerly, requiring a larger ratio of trained men to supervise them.

Analysis of the figures also raised some questions as to the source of management personnel, developing the rather surprising fact that 46 per cent of them had been promoted from clerical positions. This disclosure gives rise to a doubt—admitting the value of clerical work in training for advancement—whether this avenue is not being somewhat overworked. In other words, oughtn't there be a more thorough search for people of managerial promise in other lines—where incumbents seldom can look forward to promotion?

The inventory doesn't answer all of these questions, but it certainly raises them. It also gives department heads specific information on just who will retire and when, thus facilitating the planning for replacements. If this inventory is kept up-to-date and checked annually, top management will know the spots where it is making progress and where not; and that is the first step toward improving performance of whatever kind.



RADICALLY DIFFERENT appearance seems to be the trend in the new concepts in lightweight train designs. Shown here pulling GM's new 10-car "Aerotrainer" is the

standard diesel unit which EMD will offer for all lightweight trains. A locomotive of this design will also power the Rock Island's new Talgo-like "Jet Rocket."

Chicago Sees Lightweight Trains

Talgo test by ACF hits 103 mph; GM reveals added details on new "Aerotrainer"

Official christening of General Motors' new lightweight "Aerotrainer," and high speed test runs of an ACF prototype focused railroad attention on Chicago the week of August 22.

Railroad officers in the Midwest were given a high speed test ride on the prototype of the new Talgo-like train that ACF will deliver to the Rock Island in December. The ACF test train, forerunner of the Rock Island's "Jet Rocket," is a direct descendant of the well-known Talgo trains of Spain, which have been running since 1946. It has been modified to fit U. S. railroad conditions. Weight is about half that of conventional equipment, floor level is only 26 inches above the rail, and each "coach" consists of three 34½ ft articulated bodies.

Highest speed reached on a 144-mile round trip of the Talgo on August 22 was 103 mph on straight track. Perhaps more significant, however, was the comfort with which the train took, at 85 mph, a curve on which present streamlined equipment is restricted to 70 mph.

The General Motors train, now on exhibit at the corporation's "Powerama" display in Chicago, is aimed at helping railroads to "wipe out the passenger deficit." GM feels that its new train will substantially reduce weight, first cost and operating cost, exclusive of crew (*Railway Age*, July 4, pages 8-9).

Among the features of the "Aerotrainer" are:

- Patented air-ride suspension and elimination of through metal impacts.
- Low-cost body which can be replaced cheaper than repairing present day cars.

- Low center of gravity, but passengers ride higher than now.

- Withstands 400-ton buffing load, the standard requirement for present equipment.

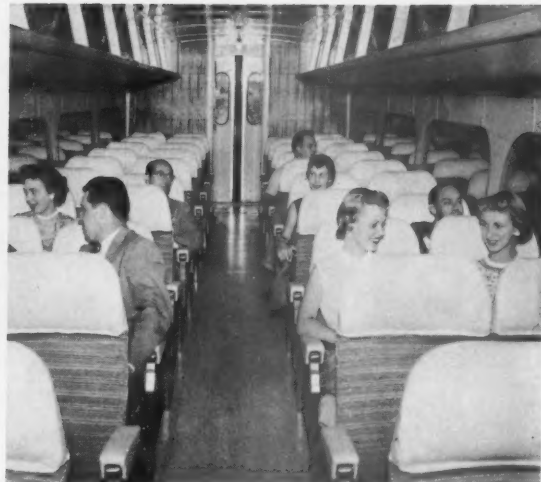
Two of the GM 40-passenger cars are equivalent to one 80-passenger conventional coach but weigh 30 tons instead of 65. When tooled for volume production, GM expects the new cars can be sold for \$900 to \$1,000 per seat, compared with \$2,250 average cost per seat for present coaches. The GM cars are 10¾ ft high and 9½ ft wide. The baggage compartment is beneath the floor, as in modern buses, contributing to a higher ride for passengers. The center of gravity is 45 in. above the rail, 10 in. less than present equipment.

The lightweight locomotive is 53 ft long and 13 ft 7 in. above the rail. It is powered by one EMD diesel engine with 1,200 hp for traction. The front four-wheel truck is the driving truck with two traction motors. An idler axle with two wheels sustains weight at the rear. Two Detroit diesel engines in the locomotive operate generators to supply current for heating, lighting and air conditioning. The locomotive has dynamic brakes, and is geared for top speed of 102 mph.

It is GM's intention to release this train and a second exactly like it to the railroads for test and demonstrations about November 1. One train will go to the PRR, the other to the NYC. Thereafter, one train will be made available to Eastern railroads, beginning with the New Haven, and the other to Western roads, commencing with the Santa Fe.



THE THREE ARTICULATED BODIES joined together in the Talgo car, with the high and wide archways between, give added appearance of spaciousness. Overhead fluorescent lighting is supplemented with airplane-type reading lights over each seat.



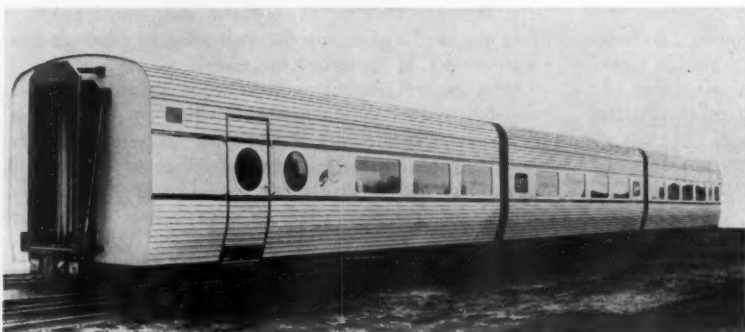
THE NEED for curtains is eliminated by the use of tinted glass in windows of the GM cars. Seats have metal backs and plastic headrests to cut cleaning time. Sliding doors are power-operated. Each 40-ft unit in the GM train has its own entrance.



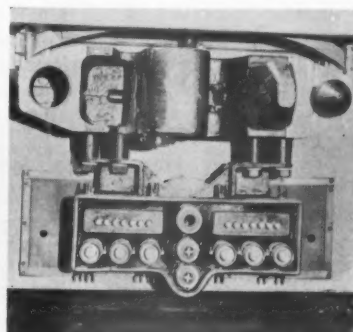
LOOKING OVER the Talgo prototype which will be almost identical in the interior with their "Jet Rocket" are these Rock Island officers—J. D. Loftis, assistant general superintendent of motive power; William E. Hayes, executive assistant; I. C. Bruce, general passenger traffic manager; and R. E. Johnston, operating vice-president.



HERE IS GM'S IDEA of loading from either ground level (left) or high level platforms. For ground level, entry steps are similar to standard construction, with drop apron. Exit from elevated platforms is facilitated by roof hatch, which swings upward to provide more headroom for passengers as they leave the train.



TALGO-TYPE unit tested by ACF is prototype built earlier this year to obtain added engineering data to incorporate into final design. Except for decorative trim, "Jet Rocket" will look like this.



THE "AEROTRAIN" uses a new automatic coupling device to join air, power, and control lines.



THE CAREER of IC Trainmaster R. K. Osterdock (left) illustrates how the training program works. Returning from service in World War II, he served as operator-lever-

man until July 1948, when he was appointed a transportation assistant. April 1, 1950, he was made assistant trainmaster. He became trainmaster later that year.

Training Tomorrow's Officer

By using transportation assistants, the Illinois Central develops promising talent in the operating department

A program for selecting and training young men as transportation assistants is today paying dividends to the operating department of the Illinois Central. Many IC operating officers are products of the program, including a third of the road's superintendents, a sizable number of trainmasters and assistants and a sprinkling of officers who have since moved over into other departments.

The IC undertaking is neither complex nor formal. There are, at present, only three transportation assistants on the railroad.

The operating department of the IC—there are similar programs in the engineering and traffic departments—began this work as early as 1940. It has since been somewhat refined and today represents a continuing effort by the road to recruit and train future officer material.

Simply put, the program works like this: Young men, whose ages have ranged as low as 22 years and as high

as 33, are placed on special assignment with the office of the general superintendent of transportation. In these jobs, the men may be handed any assignment ranging from the study of a specific switching problem to the improvement of a clerical bottleneck.

As a general rule, a new transportation assistant is paired with an older man who can pass on the benefits of his own experience. Assignments vary and changes are frequent. The "T.A.'s" are moved to various points on the railroad to give them the widest possible background and training.

Where They Come From

The transportation assistants on the IC have been appointed from all crafts, and none has been brought in directly from the outside. When an opening occurs, superintendents are asked to furnish recommendations. In the

past, appointments have been made from the ranks of trainmen, enginemen, clerks and operators.

"We like to have the feeling that we are going to make our supervisors on the railroad," O. H. Zimmerman, general manager, said recently in commenting on the program. "It is a case of consciously trying to develop greater 'family spirit'," he said.

While the transportation assistants are under the supervision of the general superintendent of transportation, they work closely with superintendents and trainmasters on specific problems. In this way, they can be moved into any trouble spot that crops up. Meanwhile, they get a liberal education in railroad operations.

The Next Step

The first step upward for most transportation assistants comes when a vacancy occurs for an assistant trainmaster. This is a real promotion, and puts the man another step up the officer ladder. It involves not only more pay and added responsibility, but assignment to a specific territory under a trainmaster or superintendent.

The training does not stop here, of course, because a major factor in the IC's program is that development of skills is a continuing job. An assistant trainmaster on the IC can expect to move frequently, sometimes as much as three or four times a year. A man's demonstrated ability to grasp new and more complex assignments is an element in how quickly he is moved from place to place.

Once a man enters the transportation assistants' program, he is encouraged to broaden his knowledge several ways.

This often takes the form of off-hour courses in public speaking and letter writing, and night-school classes in business management. After a few months in the program—the time may vary from man to man—the transportation assistant is well qualified as a junior officer.

The IC would perhaps find it difficult to place a dollars-and-cents value on its training program, but there is reason to believe that the undertaking more than pays for itself through improved employee relations and the ready reserve of young men capable of stepping into more responsible jobs.

Two New Rail Sections . . .

. . . DESIGNED FOR BETTER PERFORMANCE, LOWER MAINTENANCE

Weighing 119 and 136 lb per yd, sections developed by Colorado Fuel & Iron Corp. have important modifications compared with existing designs

The problem of reducing track-maintenance costs has many facets, one of which is the rail itself. Research has demonstrated repeatedly that variations in the weight and dimensions of rail sections have a marked effect on the life of the rail and on the amount of attention required to keep the track in line and surface. On the theory that there are still opportunities for reducing costs through improved rail sections, two new sections have been introduced during the past year.

One of the new sections weighs 119 lb per yard; the other 136 lb. Designed by W. S. Boyce, general manager railroad sales of Colorado Fuel & Iron Corp., they are known as CF&I Sections 1190 and 1360, respectively. Already they have been adopted as standard on at least two large roads, the Santa Fe and the Western Pacific.

Similar to Present Sections

To a considerable extent the new sections are designed around two Southern Pacific sections—the SP 113-lb and the SP 132-lb headfree sections. CF&I 119-lb rail has exactly the same height as the SP 113-lb, and the 136-lb section has the same height as SP 132-lb. The base widths of the comparable sections are also the same.

The main differences occur in the shape and size of the heads and the upper fillets (where the heads and webs join). In the new sections the headfree shape has been eliminated and the thickness through the upper fillets is somewhat greater. These two changes account

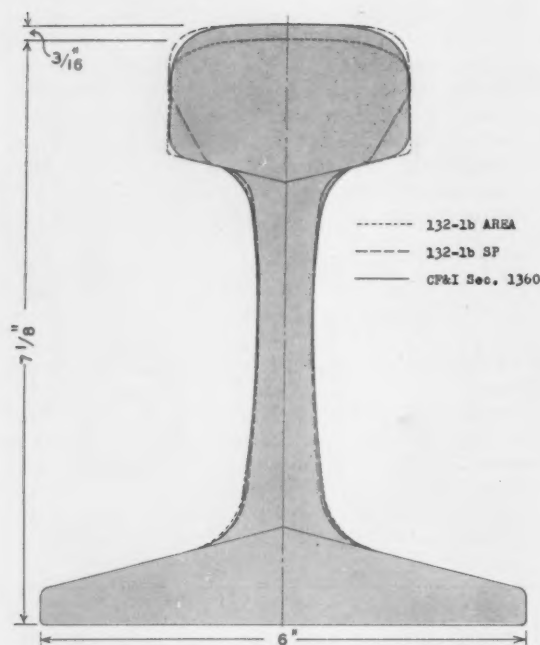
for much of the increased weight. Important changes have also been made in the head contours, including longer radii for the upper corners of the heads.

With important modifications, the new sections are also similar to existing RE sections. The CF&I 119-lb section, for instance, is identical with the 115-lb RE section from the underside of the head down to the base. Likewise, the new 136-lb section is the same from the head down as the 132-lb RE section. This means, of course, that Rail Joint Company 100 per cent headfree joint bars for the 115-lb and 132-lb RE sections will fit the new CF&I sections.

Head Depths Are Greater

The main difference between the new sections and the comparable RE sections is their greater height, all of which is in the head; both of the new sections are 3/16 in. deeper in the head than the comparable RE sections. According to Mr. Boyce, the greater height of the new sections has a two-fold purpose—to obtain greater stiffness, which would have particular advantages where the subgrade is unstable, and to obtain longer life of the rail where head wear is the determining factor, such as on curves.

The changes that have been made in the head contours of the new sections also have a definite objective. The head radius of each of the new sections is 14 in. compared with 10 in. for the RE sections. Also the corners



PROPERTIES OF SECTIONS

ITEM	SECTIONS		
	132 RE	132 SF	SEC. 1360
AREA: HEAD	4.42 ^{sq}	4.65 ^{sq}	4.86 ^{sq}
WEB	3.66 ^{sq}	3.46 ^{sq}	3.62 ^{sq}
BASE	4.87 ^{sq}	4.87 ^{sq}	4.87 ^{sq}
TOTAL	12.95 ^{sq}	12.98 ^{sq}	13.35 ^{sq}
Weight per yard	132.1	132.4	136.2
G.T./mile -- single track*	207.4	207.4	213.7
M.T./mile -- single track*	232.3	232.3	239.4
Moment of Inertia (I)	88.2	93.8	94.9
Section Modulus, Head	22.5	23.4	23.9
Section Modulus, Base	27.5	28.4	28.3
Ratio, "I" to Area	6.8	7.2	7.1
Ratio, Sec. Mod., Head-Area	1.7	1.8	1.8
Distance, Base to N.A.	3.2"	3.3"	3.34"

*Weight per mile based on nominal weight per yard.

PROPERTIES of the new sections, and how they compare with those of existing sections, are shown by these drawings.

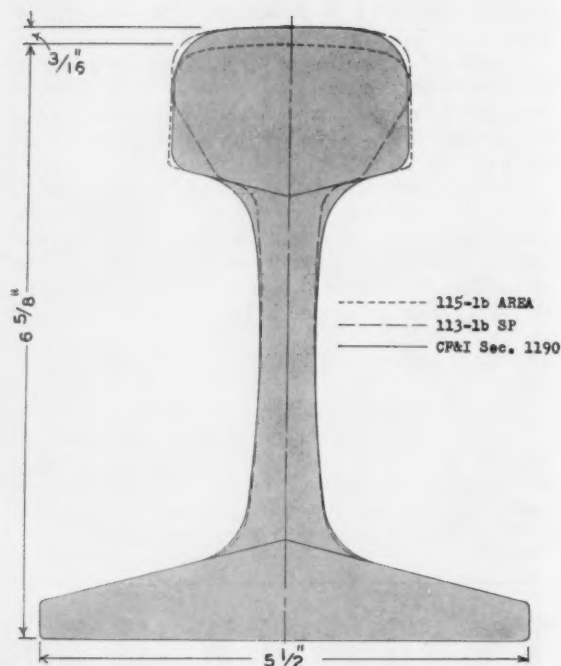
of the heads have longer radii—9/16 in. compared with 3/8 in. An important reason for making these changes, according to Mr. Boyce, was to obtain a head contour that would more nearly fit the wheel treads of equipment. The result, he believes, will be to reduce rail shelling and the development of detail fractures.

Why Used by WP and Santa Fe

Frank R. Woolford, chief engineer of the WP, explains that the 119-lb section has been adopted as standard "on our main line except in areas of unstable roadbed or heavy traffic, where we have adopted the 136-lb rail for its greater beam strength and longer life." He feels that the revised head contours of the new sections "will greatly reduce flowing of the head and shelling of the rail."

On the Santa Fe the 119-lb section has been adopted as standard for the lighter traffic main lines and the 136-lb section is standard for use on main lines carrying 20 million gross tons of traffic per year or more. A primary consideration behind this road's decision to go to the new rail sections is the fact that it is planning to butt-weld all its new rail into continuous lengths.

In the absence of joints, explains T. A. Blair, Santa



PROPERTIES OF SECTIONS

ITEM	SECTIONS		
	115 RE	113 SF	1190
AREA: Head	3.91 ^{sq}	4.04 ^{sq}	4.32 ^{sq}
Web	3.05 ^{sq}	2.77 ^{sq}	3.04 ^{sq}
Base	4.29 ^{sq}	4.29 ^{sq}	4.29 ^{sq}
TOTAL	11.25 ^{sq}	11.10 ^{sq}	11.65 ^{sq}
Weight per yard	114.7	113.2	118.8
G.T./mile--single track*	180.7	177.6	187.0
M.T./mile--single track*	202.4	198.9	209.4
Moment of Inertia (I)	65.6	69.8	71.4
Section Modulus, Head	18.0	18.6	19.4
Section Modulus, Base	22.0	22.8	22.9
Ratio, "I" to Area	5.83	6.3	6.13
Ratio, Sec. Mod., Head-Area	1.6	1.7	1.7
Distance, Base to N. A.	2.98"	3.06"	3.124"

*Weight per mile based on nominal weight per yard.

Fe system chief engineer, the life of rail will no longer be determined by end batter and droop, and wear of the fishing surfaces, but by head wear. It was decided, therefore, that rail sections having a greater depth of head were indicated, and the new CP&I sections were selected.

There was still another consideration in the Santa Fe's adoption of the new sections. The previous standard rail sections on this road were the 115-lb and 132-lb RE sections, with which joint bars made in accordance with the AREA standard were used. Because of considerable breakage experienced in these joint bars it was decided to adopt the Rail Joint Company's headfree joint bar as standard. At the same time the bolt-hole spacing was changed to the AREA standard as adopted in 1948. The change to the Rail Joint Company's headfree joint bars and to the AREA drilling was put into effect simultaneously with adoption of the 119-lb and 136-lb sections. This was done to make certain that joint bars ordered for the new rail sections would have the proper bolt-hole spacing. Colorado Fuel & Iron Corp. is prepared to roll both of the new sections. In addition, the Inland Steel Company is equipped to roll the 119-lb section at its plant at Indiana Harbor, Ind., and United States Steel is set up to roll the 136-lb section at its Gary (Ind.) plant.

A GERMAN NEWCOMER TO AMERICAN RAILROADS . . .



UNIT DELIVERED to the Army during celebration of the Transportation Corps' anniversary was returned to Eddystone for further testing. This unit differs only slightly

from the Baldwin-built diesel-electrics used by the Army. It will operate in multiple with mechanical or electrical transmission units.

Diesel-Mekydro Powers Locomotives

Army leads the way as Baldwin-Lima-Hamilton builds "GI" diesel-mechanical switcher soon to be followed by passenger units for New Haven and New York Central high-speed trains

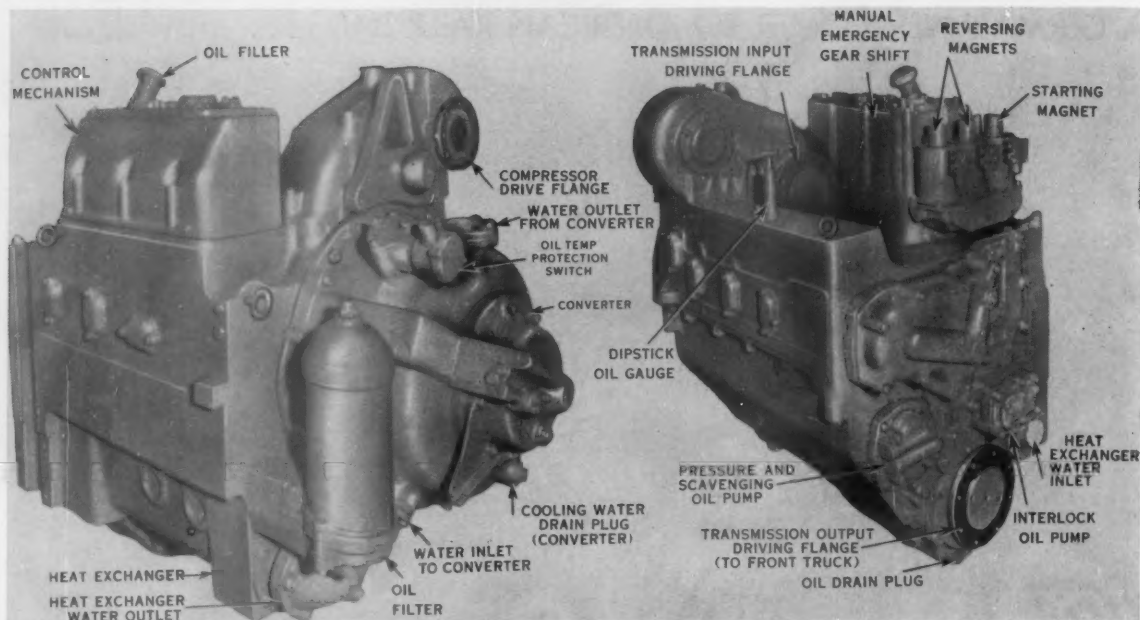
"Mechanical drive is here and it would be well for America to recognize it," observed W. J. Harlow, general mechanical superintendent of the New Haven, in his report of an inspection trip to Europe to see the operation of diesel-mechanical locomotives on the German Federal Railways. When this was being written, Baldwin-Lima-Hamilton had already completed a 52-ton diesel-mechanical switcher for the U.S. Army which is powered through one model of the Mekydro torque converter widely used in German locomotives.

Larger Mekydro units will soon be used in the high-speed locomotives that Baldwin is building for some of the lightweight low-slung passenger trains of the New Haven and New York Central. Mekydro was developed by Maybach A.G. of Friedrichshafen. Baldwin is

licensed to make and sell it in the United States. The NH and NYC high-speed passenger units will have lightweight German-built diesel engines instead of the Caterpillar D-397 used on the recently completed "GI" locomotive, the Army's No. 1281.

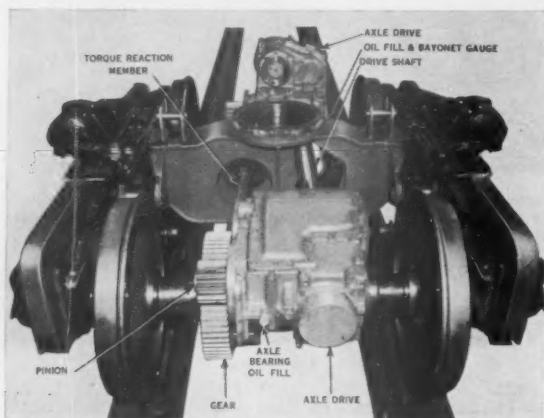
The Army Transportation Corps' quest for a lighter weight locomotive having a transmission which needs less strategic material and fewer skilled maintenance men than the diesel-electric resulted in Baldwin's first installation of the Mekydro drive.

While the Mekydro torque converter is completely German in origin, the method of applying its output power to the axles of this locomotive is primarily American. German practice is to deliver power to the axles through helical bevel gearing. This means that dropping an axle



MEKYDRO multi-speed mechanical-hydraulic transmission is shown from opposite sides in these two views. Three sizes of this unit are made with the largest capable of

transmitting 1,000 hp. The operation and appearance of each is the same as this one used on the 400-hp Transportation Corps switcher.



AXLE DRIVE on four-wheel truck of Army switcher viewed from the center of the locomotive. Input shaft passes over the center plate to the drive unit on the axle at the far end and then a secondary shaft comes back through the bolster to the inner axle drive unit. Picture shows the gear case removed.

requires extensive disassembly of the gear box and drive shafts.

Army specifications called for an arrangement which would permit the axle to be dropped out of the axle drive unit with the same ease that it would be removed from an electric traction motor. This requirement has been satisfied by a new Baldwin-Maybach design which uses Westinghouse pinion and bull gears and regular traction motor support bearings.

This torque-converter locomotive is nearly the same as the Army's standard 60-ton 400-hp overseas standard- and broad-gage diesel-electric locomotive—a model which Baldwin has previously built in large numbers. No. 1281 was designed to incorporate the same operating features,

including adjustable wheel spacing, multiple-unit operation with all other overseas locomotives, light axle loading, restrictive clearance, and service in a wide range of ambient air temperatures. This new locomotive is 8½ tons lighter than the previous Baldwin-built GI diesel-electrics, not only because of the torque converter, but also because the fuel tank is smaller and extensive use is made of aluminum throughout the locomotive.

Auxiliaries Similar

Above its welded steel frame this locomotive is arranged much the same as a diesel-electric. The principal difference is that the Mekydro unit takes the place of the main generator. All the auxiliaries are about the same—air compressor, auxiliary generator, radiator and fans. The electrical cabinet is greatly simplified, but the diesel engine is fitted with two electric starting motors. The Mekydro unit does not require a load regulator and so the Woodward UG-8 governor is only arranged to control the admission of fuel to the diesel engine.

The 350-gal fuel tank and a 64-volt battery are placed below the locomotive frame. In addition, a series of shafts, couplings, universal joints and pillow blocks are necessary to transmit the power from the Mekydro torque converter to the axles.

To allow this locomotive to traverse a 75-ft radius curve, it was necessary to couple the primary output shafts to the axle drive units on the outer axles at each end and then have secondary power shafts drive back to the inner axle on each truck. The primary drive shaft passes through an opening in the body center plate assembly and the secondary shaft passes through a hole in the truck bolster. A torque reaction member extends from the axle drive unit to the bolster and is secured by a cushioned link. This feature has the same function as the spring nose suspension of the electric traction motor.

The Transportation Corps announcement concerning the Army diesel-mechanical locomotive states that the decision to use the Maybach Mekydro transmission "was based on an extensive investigation and engineering study which indicated that the Maybach unit was the best available transmission for road locomotive service which had been thoroughly tested."

Transmission Features

This torque converter has a transmission efficiency about the same as the electrical transmission—a little over 80 per cent. A single hydraulic coupling by itself would not have this efficiency over a speed range required for railroad service. A completely mechanical gear transmission is not practical for high power output because there are great changes in engine speed and tractive effort when gears are being shifted which results in excessive slipping, heating and wearing of the clutch. This multi-speed mechanical hydraulic transmission is said to overcome the difficulties found in either the mechanical transmission or the hydraulic transmission alone. A high transmission efficiency is obtained over the entire speed range of the locomotive, and yet the tractive effort curve is an almost continuous smooth line.

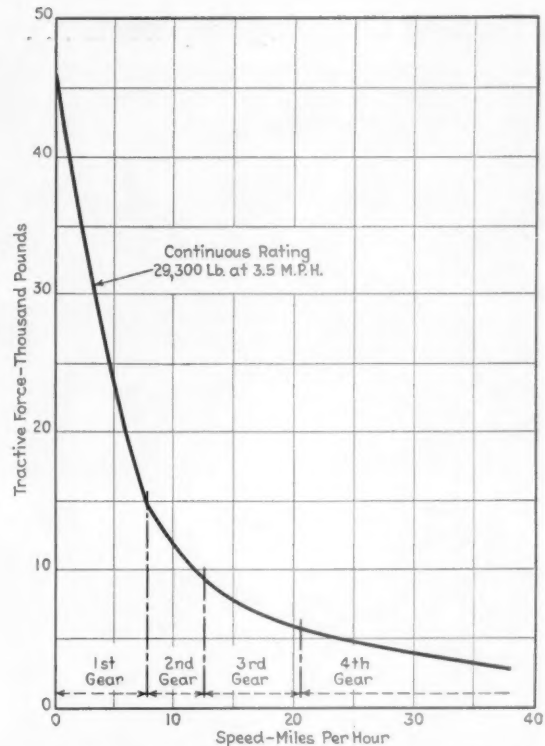
The usual hydraulic coupling consists of a centrifugal impeller and turbine mounted in the same housing. Both are completely surrounded by transmission oil. Two features characterize the Maybach transmission. One is the use of a second set of turbine blades, not connected to the output shaft, which move in during periods of gear shifting and load the input impeller so that the engine speed and loading will not vary. The second Maybach development is the overrunning claw clutch which eliminates the usual wearing difficulties of standard clutches and permits the transmission of much greater power.

Automatic Shift

The four-speed gearing is automatically shifted by a flyball-type speed regulator that responds to the relative speeds of the locomotive and the engine. The clutch linkages are moved by oil pressure. Radiator water is used to cool the Mekydro unit. This torque converter is energized, de-energized and reversed by solenoids which permit multiple unit operation with either diesel-electric or diesel-mechanical units. In event of electrical trouble the transmission can be shifted manually when the locomotive is stopped.

The Mekydro, like the electrical drive, has practical lower and upper speed limits. The upper limit is governed by design of the rotating members. The lower limit—the continuous speed of the locomotive—is determined by the overheating of the oil in the torque converter. In its present state, this unit cannot be adapted for dynamic braking. After Baldwin completes adjustments on the Army locomotive and conducts further tests with it, No. 1281 will be placed in service by the Transportation Corps.

On the New Haven, Mr. Harlow's report to Harvey W. Hales, the chief mechanical officer, said that the diesel engine with the mechanical transmission has been used with great success in Germany. In service are some loco-



TRACTION FORCE CURVE shows the speeds at which each of the four gear combinations drives the locomotive. Mekydro characteristics permit smooth gear shifting. This transmission has a continuous speed about one-tenth that of the maximum speed.

motives rated at 2,000-hp with a 1,000-hp diesel engine and mechanical transmission directly mounted on each truck.

Engines produced by Daimler, Benz, M.A.N., and Fiat for the German Federal Railways are all interchangeable. German standardization has been achieved not only in engines, but also in transmissions and related equipment.

Army Locomotive Characteristics

Type	0-4-4-0 (BB)
Horsepower for traction	400
Gage (adjustable), in.	56-1/2, 60, 63, 66
Weight in working order, lb	104,000
Length inside pulling faces, ft-in.	40-5
Truck wheelbase, ft-in.	6-11
Overall width, ft-in.	9-6
Overall height, ft-in.	13-4 1/4
Wheel diameter, in.	40
Engine:	
Manufacturer	Caterpillar
Type	4 Cycle Vee
Cylinders	12
Bore and stroke, in.	5 1/2 x 8
Brake horsepower	500 at 1,200 rpm
Idling speed—rpm	450
Weight, lb	12,100
Transmission:	
Oil capacity, gal	22
Weight, lb	3,450
Gearing	17 to 63
Maximum speed, mph	35
Continuous speed, mph	3.5

Handling Outgoing Shipments . . .



1 Outbound shipments are unloaded from street vehicles to the 140-ft powered belt conveyor and move from belt in background to live roller conveyor system in

separation area. Before reaching separation point outbound traffic is routed and marked as it moves along the belt.

How REA Cuts Handling Costs

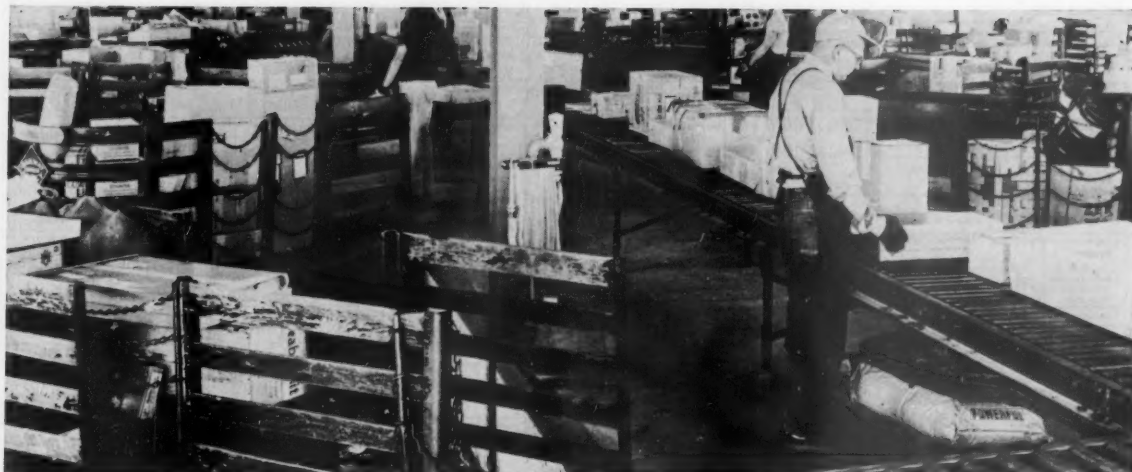
In recent months Railway Express Agency has lowered freight handling costs at its Los Angeles terminal. This is one of the results of the agency's having spent a half million dollars to improve its terminal facilities at that point. The facility, a part of the Union Passenger Terminal, handles inbound and outbound business moving via Pacific Electric, Santa Fe, Southern Pacific and UP.

Formerly, express operations at Los Angeles required hauling trains of four-wheeled depot trailers by tractor over a 300-ft ramp which had a grade of 6%. These trailers received their loads at the street level unloading

platform before proceeding to the train shed, which was 18 ft above the street and 1,800 ft from the street platform.

This consumer time, caused multiple handling and therefore was expensive. Now the street trucks proceed directly over a ramp to and from the (second deck) loading dock, now at track level, for direct transfer of traffic.

The new handling system was designed by members of REA's operations research group, aided by materials handling consultants.



2 Traffic moves in (right) from unloading area on main section of the 110-ft live roller conveyor system. Freight

is separated here and transferred to the eight 18-ft gravity roller conveyor fingers (left foreground).



3 Outbound shipments are picked off the gravity roller fingers and loaded into the depot trailers shown here spotted at sawtooth docks.



4 When trailers are ready for unloading into express cars, they are hauled in trains from the docks by tractors to the proper carside.

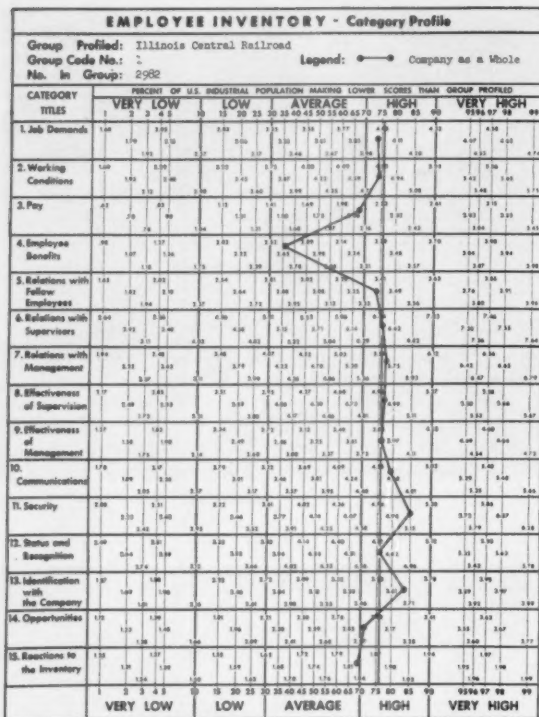
Incoming Shipments . . .



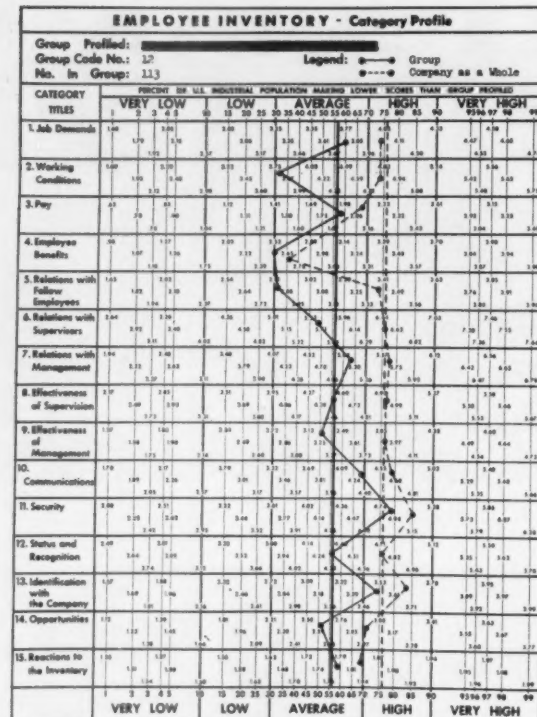
5 Inbound traffic is being placed on conveyors (left) before moving to the weighing scales. Clerk at junction of finger and main conveyor marks shipments for routes and directs them along the main conveyor. Main conveyor is 360 ft long by 2 ft wide.



6 Shipments pass from the "Y" fingers to the main inbound conveyor system. They are picked off according to route marking and pushed down gravity roller fingers in background to local delivery vehicles backed up to the loading dock.



PROFILE CHARTS were compiled for the railroad as a whole as well as for 152 supervisory groups. The IC graph (left) shows item by item how 2,982 supervisors rate their company. The vertical line at 76 is a company average. The 15-man group represented in the center graph is



above the company average (solid vs. dotted lines). The 113-man group at right fell below the company on every item, thereby pointing to a possible "problem area." These are some things the IC learned when it asked its supervisors the question . . .

What Do the Supervisors Think?

Realizing that future success hinges on good supervision, the Illinois Central has questioned everyone from assistant track foreman to president—Results are encouraging

The management of the Illinois Central has received an "open letter" from 3,000 officers and supervisors, telling exactly what these men like and don't like about their obs.

Here are some things the IC learned:

- The level of morale on the railroad is high—higher than in 76% of the groups in other industries previously surveyed.

- Officers and supervisors on the IC have, in general, a favorable opinion of the management, their fellow employees and working conditions. They particularly emphasize their feelings of security against arbitrary discharge, their pride in the job and their loyalty and interest in the success of the company.

- Naturally, not every person or group is completely satisfied. Some offer constructive criticism of wage and salary administration, the employee benefit program and policies followed in handling promotions. There is considerable variation between departments, and between groups within the same department.

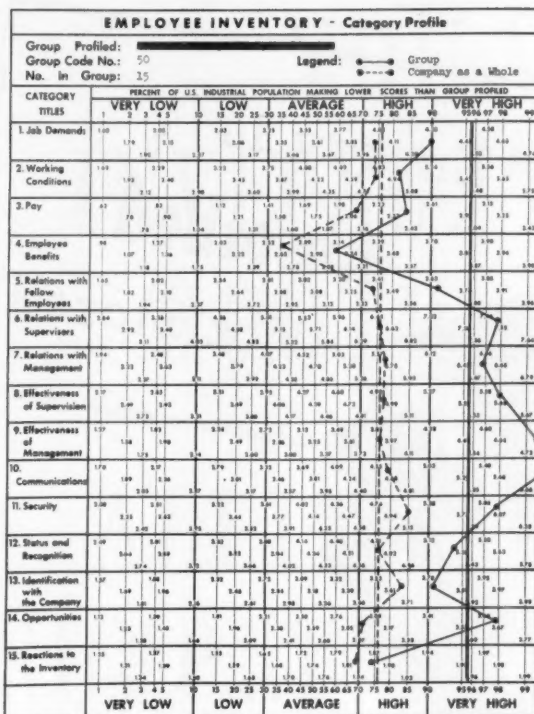
This "letter" from supervisors was not, of course, a

letter at all. The railroad, working with the Industrial Relations Center of the University of Chicago, has conducted a comprehensive survey of supervisor attitudes. The survey covered such major questions as wages and salaries, benefits, departmental cooperation, communications, opportunities, status and recognition, job demands and opinion of the management.

Findings from the survey have given IC management a clear picture of the thinking and attitudes of all its supervisory personnel. The railroad now has some clearly marked pathways showing the way to increased effectiveness of officers and supervisors. Improved employee relations can well be the result.

"The IC recognizes the truth that its most important resource is not its millions of dollars of investment in property—essential as that investment is—but rather its investment in leadership," IC President Wayne A. Johnston said recently in discussing the survey.

Planning of the survey, and its execution, was a year's job. Nor can follow-up action be accomplished with overnight magic. In many cases, the problems



pointed up in the survey can be ironed out locally, and on these the IC has moved quickly. Others, like the broad question of wage and salary administration, require time and study, and final decisions rest with management. These system problems are already being dealt with in a top-level interdepartmental group known as the general personnel committee.

Why a Survey?

The IC's decision to conduct a supervisory attitude survey was, in fact, an outgrowth of the formation of the personnel committee nearly three years ago. Grappling with the problem of how to improve the tone of employee relations, the committee concluded that the way to make a strong railroad stronger was through effective and loyal supervision. But what did this group really think of the company? Obviously, this next generation of management held the key to the success or failure of all other undertakings.

The idea of how to handle the huge pulse-taking job came from the road's Personnel Department. A simple approach was recommended: To find out what supervisory personnel think of the company, their jobs, working conditions, training needs and other significant questions, ask them. Include every supervisor and officer from assistant track foreman to the president. The department suggested using for the job the SRA Employee Inventory developed by the University of Chicago.

The department pointed out that such firms as Sears, Roebuck & Co., Minnesota Mining & Manufacturing, Johnson & Johnson, Weyerhaeuser Timber Company, and Corn Products Refining have in the past turned to the university for similar surveys. By using the univer-

WHO IS THE "GPC" ON THE IC?

The General Personnel Committee of the IC, under whose guidance the supervisory attitude survey was carried out, was established by President Johnston some three years ago. This interdepartmental group includes top officers from all major departments—operating, traffic, engineering, purchasing and stores, accounting, law, executive and personnel. The Personnel Department functions as the "working arm" of the committee and, as such, had an important role in organizing and handling details of the survey.

At present, the committee is delving into the problems pointed up in the survey returns. Members are studying the feasibility of a modern program of salary administration for the IC, a more effective benefit program, creation of better channels of communication, and the development of in-training programs for the various departments.

Members of the committee include O. H. Zimmerman, general manager; E. J. Carr, assistant vice-president, traffic; A. L. Sams, office engineer; C. S. Burt, assistant to vice-president, P&S; G. M. Craig, general auditor; E. J. Wright, assistant general attorney; C. G. Massoth, editor, Illinois Central magazine; and E. H. Hallmann, director of personnel.

sity facilities, it would be possible to measure the IC against these and many other industries; and since all replies were sent direct to the university, the identity of participants would be protected.

These are the major things that IC management could expect to learn from the SRA survey:

1. How well motivated supervisors are and how much real power and drive exists at the various levels;
2. How well coordinated the organization is and to what degree supervisors can pull together in a cooperative work team;
3. Where potential for friction and breakdown in supervisory relations exists and the reasons;
4. What the communication needs of the organization are and precisely where improvements are most needed;
5. What the training needs of supervisors and middle management are and precisely where the training is most needed; and
6. What the operating difficulties are which hamper the efficiency of the organization.

How the Job Was Done

With the approval of the personnel committee, the survey work commenced in September 1954. In the following months, groups were assembled at many points on the railroad to complete the survey questionnaire. Locked "ballot boxes" were sent directly to the university. Off-line personnel, or those at isolated points, participated individually by mail.

The 78 questions in the standard SRA questionnaire fall into 14 principal categories—job demands, benefits, satisfactions, and the like. Questions are not, however, arranged in order, and the job of sorting, tabulating and scoring is handled by the university.

(Continued on page 52)



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FOLLOW-UP SESSIONS, like this one with Executive Department supervisors in the general office, Chicago, helped carry survey results back to the participants. Handling this

job is W. E. Erickson, director-employee inventory, University of Chicago, and J. R. Sullivan, the IC's supervisor of personnel development (seated, right of easel).

What Do the Supervisors Think?

(Continued from page 49)

By the end of January this year, 3,024 IC employees had completed the inventory and initial results were compiled.

Aside from the overall company picture, these returns also were grouped by jobs (for example, all trainmasters), by offices and by departments. There were, in all, 153 such groupings. A graph "profile" was prepared for each group to show comparisons with the "norm" for outside industry and with the company's overall average.

Meanwhile, in space provided on each questionnaire, 1,077 officers and supervisors had taken time to write in "added comments" on matters they considered pertinent. These comments, comprising a 124-page volume, gave the IC a further look backstage.

The Carry-Back

After the initial findings were issued by the university, the IC began bringing the findings back to each group. This had been promised to all who participated, and a standard pattern was followed. At each meeting, the group was apprised of the survey results for the railroad as a whole. Next, the specific group's "profile" was compared with that of the overall company. Then, to obtain maximum value from the survey, the senior officer was dismissed and an open-forum discussion was held.

These discussions, guided by a representative of the university, helped pin-point specific complaints, and often produced suggestions for a cure. A report was prepared on each such meeting, again taking care that no individual was identified with his remarks.

The university and the IC's Personnel Department conducted 63 of these follow-up meetings. More than 100 others were handled locally by division officers, aided by a specially prepared "Discussion Leader's Guide."

By early June the sessions were complete, and IC management could begin digesting the volumes of significant information it had obtained.

One important step to obtaining corrective action on

problems, particularly departmental or local problems, was the use of a "survey analyzer." An "analyzer" booklet was furnished to each group leader or department head. The booklet was designed to aid the officer in analyzing problems in his department or office and in planning corrective action.

The road is pushing this work actively. As changes are made, the persons affected are advised that such changes are the direct result of their participation in the survey. In this way, the road is "keeping faith" with the participants.

A digest of all material obtained from the survey and the follow-up sessions was prepared by the university and the IC personnel department. Problems were grouped under three major headings—system, department and local. Relative importance of each problem was established on the basis of the number of "mentions" in the carry-back sessions.

"The operating problems of the railroad, its structure, organization and management have not been emphasized as 'problems' by the supervisors," the university said in a preface to the report. "It appears that this operating area of management is not widely and critically questioned by the supervisors."

The university recommended that the railroad, as a long-range step, conduct a study "of the various methods of salary administration in an effort to determine which, if any, would be appropriate for installation on the IC." It suggested, also, that job descriptions be compiled; that supervisors be educated on details of the existing benefit program; that steps be taken to upgrade co-operation between departments, and that better tools be developed to select personnel for promotion.

The survey shed light, also, on what supervisory personnel consider their training needs, from both a technical and human relations standpoint. The university's final report recommended that some person or organization, possibly the Personnel Department, be charged with helping the departments determine their training needs. Once under way, the departments would, of course, handle the training work themselves.

A start has already been made in this direction. A program is being drafted for the Transportation Department, and will be submitted to the personnel committee for review.

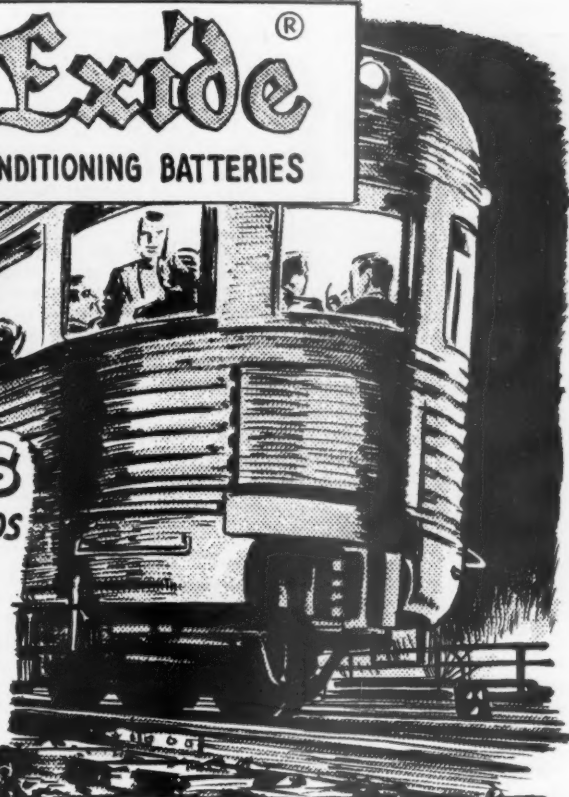
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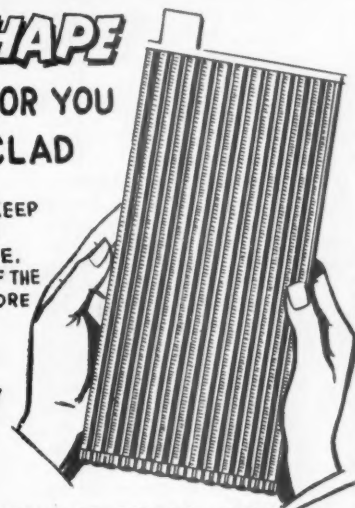


NATURE'S IDEAL SHAPE

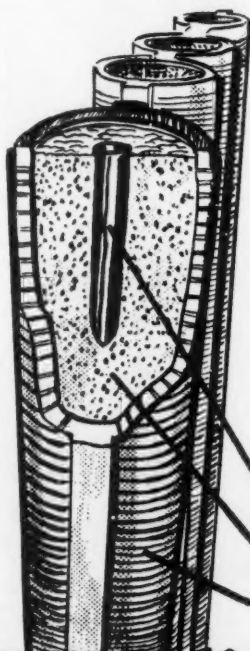
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Financial

(Continued from page 16)

31, 1954, to \$680.2 million on that date this year—a drop of 17.5%.

Chesapeake & Ohio.—Stock Option Plan.—The C&O has asked the ICC for authority to issue and sell 200,000 shares of previously authorized common stock to officers and key employees of the road. Under terms of the plan, the road has informed the commission, C&O President Walter J. Tuohy will be allowed to purchase 2,000 shares of the stock for each year, 1955 through 1959, and 41 other key employees have been granted options to buy an aggregate of 92,500 shares of the stock at \$45.875 per share. Other options which may be granted under the plan would limit purchasers to 1,000 shares for any one year, the price to be determined by the market price at the date the option is granted.

Securities

Baltimore & Ohio.—Refunding Plan.—This road has applied to the Interstate Commerce Commission for authority to issue and sell and/or exchange \$280,000,000 of first consolidated mortgage bonds as part of its refunding plan (*Railway Age*, February 7, page 56). The ICC exempted the B&O from competitive bidding requirements in connection with this plan (*Railway Age*, February 21, page 16). The proposed \$280,000,000 issue consists of \$80,000,000 series A bonds, \$80,000,000 series B, and \$120,000,000 series C. The issue is intended to provide funds to be used with treasury cash to retire \$275,833,050 of bonds now outstanding and to pay redemption premiums in the aggregate of \$12,360,420. Under terms of the plan, the bonds now outstanding may be exchanged for equal amounts of the bonds to be issued. The road also is offering \$60,000,000 of series A, \$40,000,000 of series B, and \$20,000,000 of series C bonds to be sold at 99%, 98¾% and 100% of principal, respectively, or an aggregate discount of \$1,800,000, the road informed the commission. The exchange and sale offer is being handled by an investment group headed by Glore, Forgan & Co., Halsey, Stuart & Co. and Alex. Brown & Sons. The road stated that it expects to reduce interest charges through the transaction by \$3,669,527.

The B&O also applied for authority to issue \$25,000,000 of series D bonds, to be used as collateral initially for a short term loan for \$15,000,000 to provide funds to meet the expenses of the proposed transactions.

Claremont & Concord.—Reincorporation.—The ICC has authorized this road to issue 10 shares of common

stock to Samuel M. Pinsky to facilitate reincorporation of the road in New Hampshire (*Railway Age*, August 22, page 15). The ICC deferred action on the reincorporation itself.

Lehigh Valley.—Bond Redemption.—The ICC has authorized this road to issue a promissory note for \$4,500,000 to evidence a loan of that amount, the proceeds to be used in redemption on September 19 of all its \$7,840,000 of 6% consolidated mortgage annuity bonds due April 1, 1989. Other funds needed in the redemption are to be met out of the road's treasury cash (*Railway Age*, August 1, page 13). The call price is \$1,170 per bond, plus accrued interest, for an aggregate amount of \$9,172,800.

Dividends Declared

CHICAGO GREAT WESTERN.—common, 25¢, payable October 3 to holders of record September 15; 5% preferred, 62½¢, quarterly, payable September 30 to holders of record September 15.

CHICAGO SOUTH SHORE & SOUTH BEND.—15¢, quarterly, payable September 15 to holders of record September 2.

DENVER & RIO GRANDE WESTERN.—increased quarterly (from net income for 1954 calendar year), 62½¢, payable September 19 to holders of record September 9.

PITTSBURGH, FT. WAYNE & CHICAGO.—common, \$1.75, quarterly, payable October 3 to holders of record September 9; 7% preferred, \$1.75, quarterly, payable October 4 to holders of record September 9.

READING.—4% second preferred, 50¢, quarterly, payable October 13 to holders of record September 22.

UNION PACIFIC.—common, \$1.25, quarterly; 4% preferred, \$1, semiannual; both payable October 1 to holders of record September 6.

Security Price Averages

	Aug. 30	Prev. Week	Last Year
Average price of 20 representative railway stocks	94.49	95.37	67.10
Average price of 20 representative railway bonds	97.96	98.43	96.28

Railway Officers

BANGOR & AROOSTOOK.—Howard L. Cousins, Jr., assistant general counsel, has been named assistant to president at Bangor, Me.

CHICAGO & WESTERN INDIANA-BELT OF CHICAGO.—Peter T. Barrett, land and tax commissioner of both the Belt and the C&WI, retired August 31. Leland W. Howard, assistant land and tax commissioner of both roads, has been named to succeed Mr. Barrett.

COTTON BELT.—R. A. Pendergrass has been appointed general freight and passenger agent at Tyler, Tex. The position of general passenger agent, heretofore held by Mr. Pendergrass, has been abolished. R. J. Morris has been named general agent at Nashville, Tenn., succeeding Russell W. Harlan, transferred to Birmingham,



BOSTON & MAINE.—August S. Nienhouws has been appointed office assistant to executive vice-president of the B&M at Boston. Mr. Nienhouws was formerly a transportation analyst for Ebasco Services, Inc., an engineering consulting firm in New York.

Ala. Mr. Harlan replaces Kenneth Cameron, who has been transferred to Washington, D.C., to succeed the late T. A. McDonough.

FORT WORTH & DENVER.—A. K. Hepperly has been appointed general agricultural agent, at Denver. Macyl K. Orman has been named agricultural agent at Fort Worth.

GULF, MOBILE & OHIO.—Mrs. Vera Elvert has been appointed assistant to passenger traffic manager at St. Louis. Mrs. Elvert's duties will include supervision of hostess service and such other passenger traffic matters as may be assigned to her.

ILLINOIS CENTRAL.—Arthur G. Moody, executive assistant at Chicago, will retire August 31 after 43 years of railroad service.



DENVER & RIO GRANDE WESTERN.—William G. Luebke, special representative of the purchasing department, who has been appointed purchasing agent (*Railway Age*, August 15, page 53).

Mark Block, engineer of bridges, has been appointed assistant to chief engineer, succeeding **John E. Fanning**, who retired August 31 after 50 years of service. Mr. Block's successor is **Elmer A. Johnson**, assistant engineer of bridges, who in turn has been replaced by **Alphus L. Leach**, assistant to engineer of bridges.

ILLINOIS TERMINAL.—**Leonard E. Smith** has been appointed general agent at Atlanta, Ga., succeeding **George K. Bennett**, who has resigned to accept a position with another carrier.

KANSAS CITY SOUTHERN.—**F. A. Grimmett** has been appointed trainmaster, sixth and seventh subdivisions, at Shreveport, La., succeeding **R. E. Canty**, whose promotion to superintendent, Louisiana and Arkansas division, at Shreveport, was announced in *Railway Age* August 8.

F. A. Key, Jr., has been appointed assistant freight traffic manager at Shreveport, and **E. F. Goudelock** has become general agent at Seattle, Wash. **N. G. Stripling** has been named general agent at San Antonio, Tex.



LOUISVILLE & NASHVILLE. — **George C. Howard**, director of personnel (above), who has been appointed assistant to president at Louisville, Ky., and **Wilbur S. Scholl** (below), who succeeds him (*Railway Age*, August 22, page 16).



MERIDIAN & BIGBEE.—This company's new board of directors has elected the following officers: **John Stevens, Jr.**, chairman of the board; **R. H. Lorenz**, senior vice-president; **Emmett W. Below**, vice-president for finance; **E. N. West**, secretary—all at Menasha, Wis., and **V. V. Myers**, vice-president in charge of traffic, at Meridian, Miss.

W. W. Sullivan will continue as president; **Catherine Sullivan** as treasurer and assistant secretary; **J. C. Floyd** as general counsel; **George M. Young** as auditor and general freight agent, and **Mrs. Irene M. Parker** as assistant treasurer—all at Meridian.

W. W. Sullivan, **R. H. Lorenz** and **D. G. Hyde** were elected members of the executive committee.

MINNEAPOLIS & ST. LOUIS.—**Colin Wilson Wright**, vice-president and general counsel at Minneapolis, retired on September 1, after 36 years of railroad service, 33 of which were



Richard Musenbrock

with the M&StL. **Richard Musenbrock**, general solicitor, has been named general counsel, and **William Powell**, assistant general counsel, has been promoted to general solicitor. Mr. Musenbrock was born at St. Louis, December 9, 1904, and studied law at City College of St. Louis. While completing pre-legal training at night, Mr. Musenbrock was a deputy clerk in the United States circuit court of appeals. In 1925 he became secretary and law clerk to Circuit Judge W. F. Booth at Minneapolis, continuing his study at Minnesota College of Law. Mr. Musenbrock was admitted to practice in federal courts in 1928, and in 1932 joined the M&StL legal department. Promoted to general attorney in October 1935, he was named general solicitor in October 1949.

NEW YORK CENTRAL.—**R. D. Timpany**, assistant superintendent at Albany, N.Y., has been appointed acting assistant master mechanic at Dewitt, N.Y., succeeding **L. C. Lytle**, transferred.

Willard F. Place, vice-president—finance since 1939, is on leave of absence through June 1956, at which



SANTA FE.—**Dale McGrath**, auditor of disbursements, who has been appointed auditor at Topeka, Kan. (*Railway Age*, August 8, page 68).

time he will retire from his railroad connection. Effective September 1, Mr. Place has been named executive vice-president of the Excelsior Savings Bank, of which he has been a trustee since 1934.

NEW YORK CENTRAL—PITTSBURGH & LAKE ERIE.—**Arthur A. Meyer**, general passenger agent at Pittsburgh, has been appointed general passenger agent (rates and divisions) at New York. Mr. Meyer succeeds **Harry G. Gillis**, who has retired after 48 years with the NYC.

NORTHERN PACIFIC.—**W. A. Lemon**, city freight and passenger agent at Los Angeles, has been appointed general agent at Toronto, Ont., succeeding **C. C. Gardner**, who has been transferred to the traffic department at St. Paul.

ROCK ISLAND.—**W. H. Lloyd**, purchasing agent, has been appointed manager of purchases and stores at Chicago, succeeding **E. G. Roberts**, who retired August 31 after 47 years of service. **Harold Lawson** has been appointed fuel agent and office manager at Chicago, succeeding **Harry W. Berg**, who has been promoted to purchasing agent, replacing Mr. Lloyd.

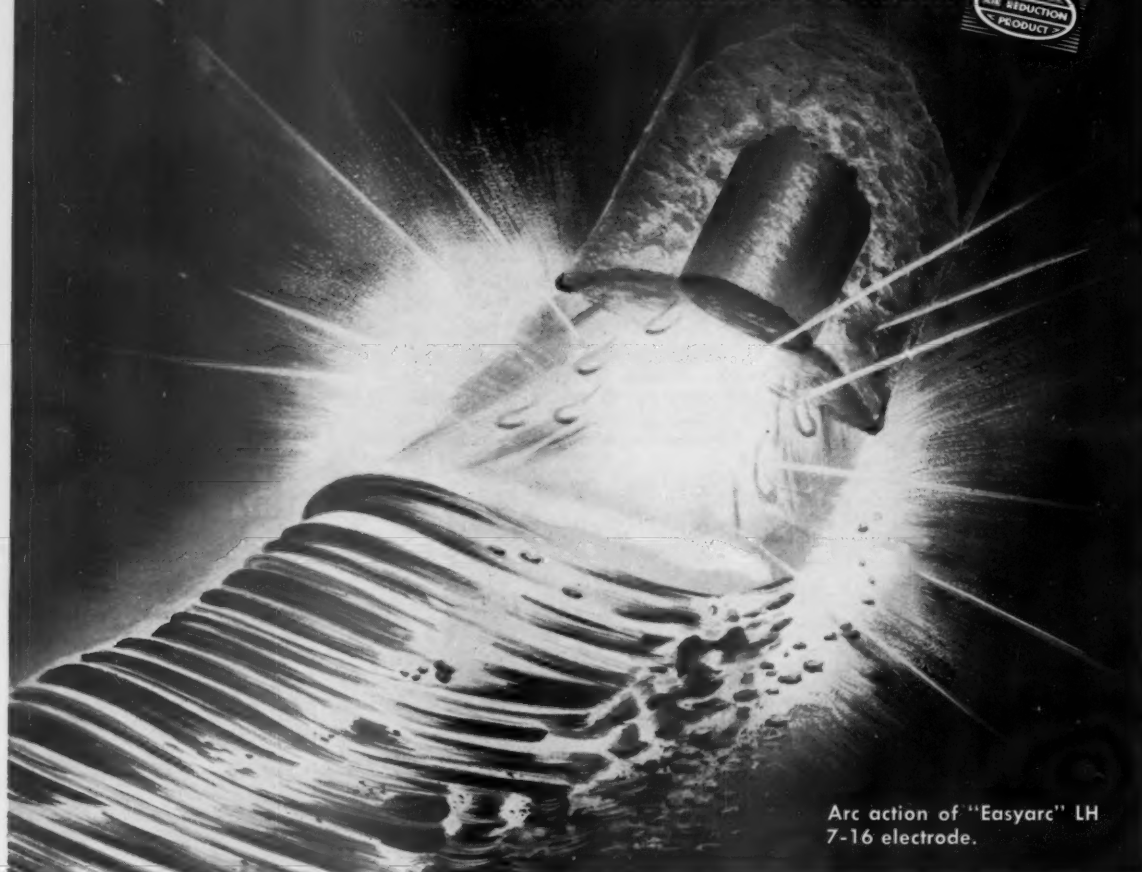
SANTA FE.—**John J. Knifke**, assistant editor of the Santa Fe Magazine, has been appointed editor at Chicago, succeeding **M. L. Shepherd**, resigned. **John W. Tilsch**, editorial assistant, replaces Mr. Knifke as assistant editor.

OBITUARY

W. W. Hale, retired vice-president, system freight traffic, for the **Southern Pacific**, died August 24 at San Francisco.

James A. Mercer, 82, retired assistant general manager of the **Northwestern Pacific**, died recently at Tacoma, Wash.

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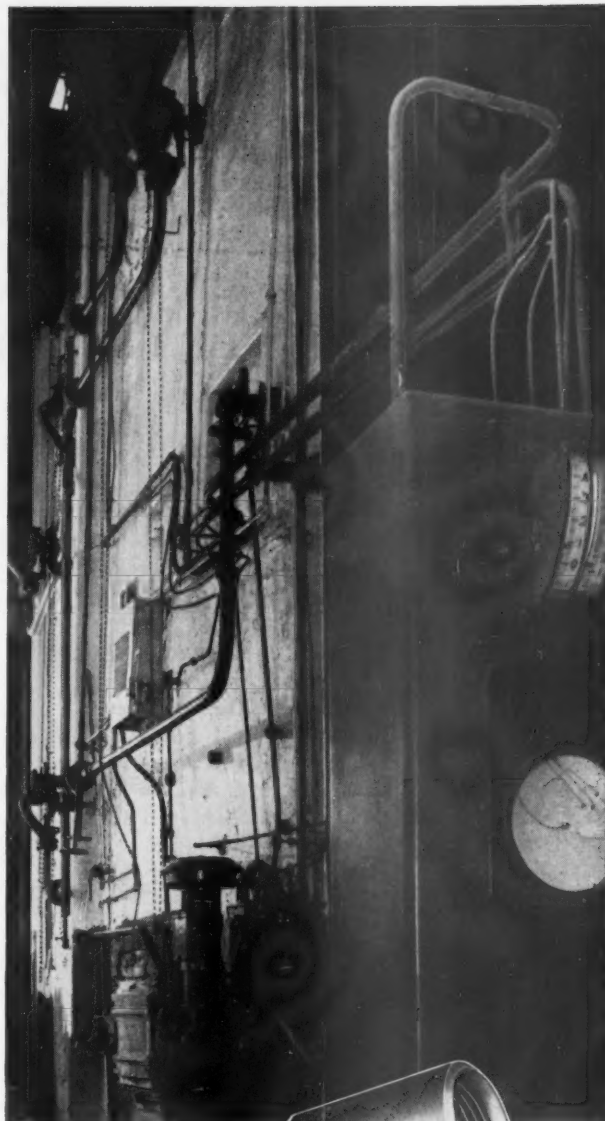
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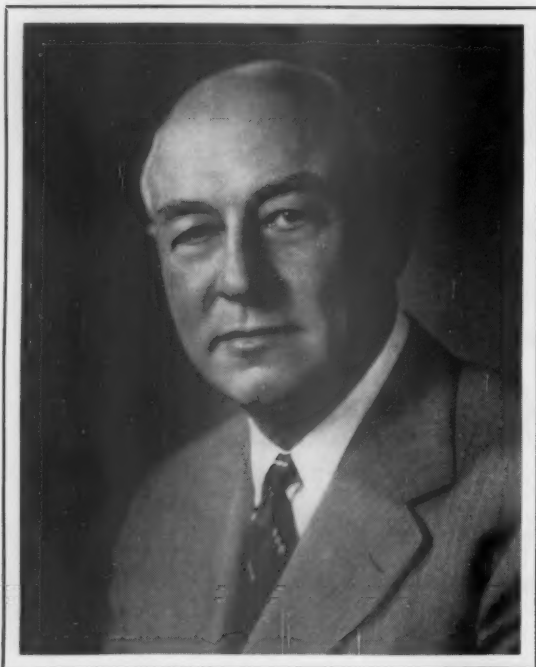


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A

- Air Reduction Sales Company 56
Agency—G. M. Basford Company.
 American Brake Shoe Company, Brake Shoe and
 Castings Division18, 19
Agency—Doyle, Kitchen, McCormick, Inc.
 American Steel Foundries30, 31
Agency—Erwin, Wasey & Company, Ltd.

B

- Bethlehem Steel Company 1
Agency—Jones & Brakeley, Inc.
 Boyer, R. H. 59
 Brake Shoe and Castings Division, American Brake
 Shoe Company18, 19
Agency—Doyle, Kitchen, McCormick, Inc.
 Buckeye Steel Castings Company 27
Agency—Thomas J. Stead, Advertising

C

- Cardwell-Westinghouse Company50, 51
Agency—The Stuart Potter Company
 Caterpillar Tractor Company 24, 25
Agency—N. W. Ayer & Son, Inc.
 Chicago Steel Service 60
Agency—Fred H. Ebersold, Inc.
 Classified Advertisers 59
 Cornell-Dubilier Electric Corporation 59
Agency—Friedl-Reiss-McGone Advertising

E

- Edgewater Steel Company 20
Agency—Walker & Downing
 Electric Taper & Equipment Company6, 33
Agency—Stevens, Inc.
 Exide-Electric Storage Battery Company22, 53
Agency—Geare-Marston, Inc.

G

- General American Transportation Corp. 36
Agency—Weiss & Geller, Inc.
 General Railway Signal CompanyBack Cover
 Gould National Batteries, Inc. 26
Agency—Hutchins Advtg. Company, Inc.

H

- Hunt Company, Robert W. 59
 Hyatt Bearing Division, General Motors
 Corporation 4
Agency—D. P. Brother & Company, Inc.

I

- Iron & Steel Products, Inc. 59

J

- Jackson Vibrators, Inc.6, 33
Agency—Stevens, Inc.

L

- Linde Air Products Company 21
Agency—J. M. Mathes, Inc.

P

- Prismo Safety Corporation 32
Agency—Michener & O'Connor, Inc.

R

- Rail & Industrial Equipment Co., Inc. 59
 Railway Educational Bureau, The 59

S

- Simtex Mills 8
Agency—Ellington & Company, Inc.
 Socony Mobile Oil Company, Inc. 34
Agency—Compton Advertising, Inc.
 Standard Car Truck Company28, 29
Agency—The Stuart Potter Company
 Symington-Gould Corp., TheInside Back Cover
Agency—Ed Wolff & Associates

T

- Timken Roller Bearing CompanyFront Cover
Agency—Batten, Barton, Durstine & Osborn, Inc.

U

- Union Switch & Signal
 Division of Westinghouse Air Brake Company .. 2
Agency—Batten, Barton, Durstine & Osborn, Inc.

W

- Westinghouse Air Brake Company 17
Agency—Batten, Barton, Durstine & Osborn, Inc.
 Whiting CorporationInside Front Cover
Agency—Waldie & Briggs
 Wix Corporation 23
Agency—Humbert & Jones

Y

- Youngstown Sheet & Tube Company 57
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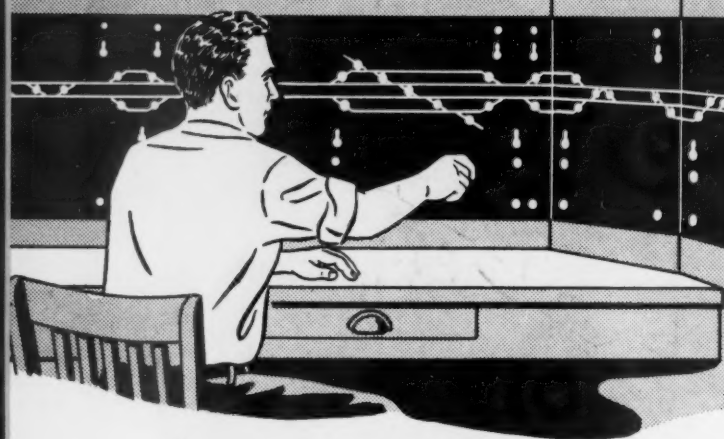
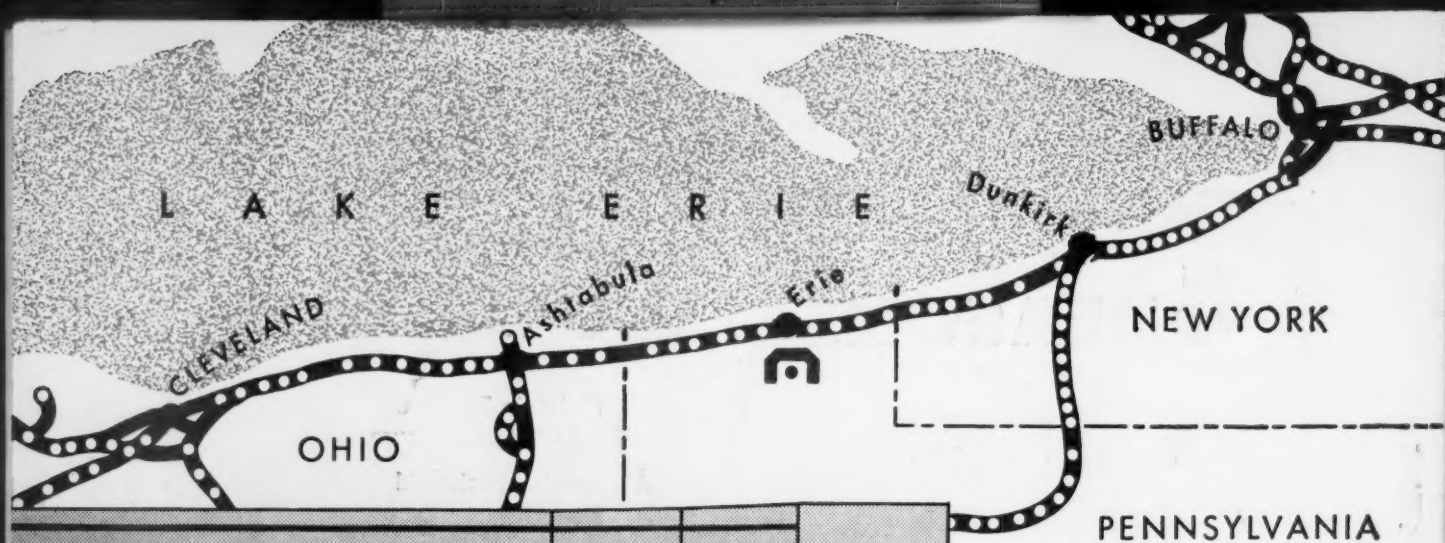
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